

**UPPER ARKANSAS RIVER  
CONSERVATION RESERVE ENHANCEMENT PROGRAM  
PERFORMANCE REPORT  
BY THE  
STATE OF KANSAS**



Photo by Kansas Department of Wildlife & Parks



**October 1, 2010 – September 30, 2011**

## Table of Contents

|   |    |
|---|----|
| <a href="#">Executive Summary</a> .....   | 1  |
| <a href="#">Overview</a> .....  | 2  |
| <a href="#">History</a> .....   | 2  |
| <a href="#">Kansas-Colorado Arkansas River Compact</a> .....                          | 2  |
| <a href="#">CREP Steering Committee</a> .....   | 3  |
| <a href="#">CREP Project Implementation Summaries</a> .....                           | 4  |
| <a href="#">Outreach</a> .....  | 5  |
| <a href="#">Technical Assistance</a> .....  | 5  |
| <a href="#">Agency and Organization Cooperation</a> .....                             | 6  |
| <a href="#">Land Conserved</a> .....  | 9  |
| <a href="#">Water Conserved</a> .....   | 9  |
| <a href="#">Ground Water Monitoring and Activities</a> .....                          | 10 |
| <a href="#">Annual Irrigation Water Use in CREP Area: 2007 - 2011</a> .....           | 11 |
| <a href="#">Summary of Non-Federal Program Expenditures</a> .....                     | 12 |
| <a href="#">Progress on Program Objectives</a> .....                                  | 13 |
| <a href="#">Figure 1: Map of CREP Eligible Project Area</a> .....                     | 8  |
| <a href="#">Figure 2: Map of Upper Arkansas River CREP Retired Water Rights</a> ..... | 10 |
| <a href="#">Figure 3: CREP Water Quality and Water Level Monitoring</a> .....         | 15 |
| <a href="#">Attachment A: UAR CREP Brochure &amp; Outreach Poster</a> .....           | 19 |
| <a href="#">Attachment B: Outreach Schedule</a> .....                                 | 22 |
| <a href="#">Attachment C: Process for Implementing UAR CREP in Kansas</a> .....       | 24 |
| <a href="#">Attachment D: Land Enrolled in CREP</a> .....                             | 28 |
| <a href="#">Attachment E: Monitoring Wells and Average Groundwater Levels</a> .....   | 31 |
| <a href="#">Attachment F: Steering Committee Meeting Minutes</a> .....                | 33 |

### For additional information, contact:

Steve Frost, CREP Coordinator  
Kansas Department of Agriculture, Division of Conservation  
109 SW 9<sup>th</sup> Street, 2A Topeka, Kansas 66612-1283  
(785) 296-3600; [www.scc.ks.gov](http://www.scc.ks.gov)

## Executive Summary

The Conservation Reserve Enhancement Program (CREP) is a federal – state partnership created for enhancing water conservation efforts along the Upper Arkansas River corridor from Hamilton County to Rice County. The Upper Arkansas River CREP has been officially approved and operating for four years; this annual report provides a synopsis of the implementation activities and progress to date.

CREP is a specialized version of the Conservation Reserve Program (CRP) in which the USDA Farm Service Agency (FSA) and the State of Kansas have mutually agreed to address specialized natural resource concerns. The Natural Resource Conservation Service is USDA's provider of technical services to producers who are implementing FSA's CREP contracts in the field. The Kansas Department of Agriculture - Division of Conservation (DOC) is the primary coordinator acting to administer the program in concert with numerous other state, local, and private partners including the Kansas Water Office, Kansas Department of Agriculture - Division of Water Resources, Kansas Department of Wildlife, Parks and Tourism, Kansas Department of Health and Environment, Kansas Geological Survey, Kansas State University, Groundwater Management Districts #3 and #5, and Pheasants Forever.

The Upper Arkansas River CREP is a voluntary, incentive based program allowing producers to enroll irrigated acres in targeted, eligible areas for 14-15 year contracts with FSA, permanently retire the associated state water rights on the enrolled acres, and establish an approved land cover (typically a native grass) on the same acreage. The producer receives an upfront, incentive payment from the DOC and an annual rental payment, plus additional cost share opportunities for specific conservation practices from FSA.

Groundwater is the dominant source of water for all uses in the basin, and aquifer declines are a serious concern. Therefore, water conservation is the main management objective in the Upper Arkansas CREP, but the program also provides other resource benefits including soil conservation, water quality protection, wildlife habitat enhancement, and energy savings. The majority of the irrigated acres being enrolled have been on highly erodible, sandhills soils that are unsuitable for dryland farming.

One of the most significant merits of the program to date has been establishing cover on these highly erodible lands. The extremely sandy and fragile, windblown soils of the sandhills will be very difficult to re-vegetate when irrigation is no longer possible after crop production runs out due to groundwater declines. The CREP program has given these area producers a viable option for starting native grass stands and other conservation covers while limited irrigation water is still available - and with the incentive and financial opportunity to do it.

As of September 30, 2011, a total of 67 CREP contracts on 11,013 acres have been approved by the State of Kansas. These contracts have resulted in the permanent retirement of 22,245 ac-ft of annual water appropriation from 95 wells. The contracts represent a total of \$665,260 in state sign-up payments to producers over the past four years. These payments are matched by total annual producer payments from FSA totaling about \$1,300,000 per year over the 14 – 15 year life of the CREP contracts. Since December 6, 2007, a total of \$5,889,685.06 of non-federal expenditures has been made in support of the CREP project. The State of Kansas has again met its financial commitment to provide at least 20% of the total project costs of the program through a combination of direct payments, technical assistance and in-kind contributions.

During FY2010, FSA approved expansion of the enrollment limit to 28,950 acres which increased the individual county cap limits for interested producers. As a result of recent increases in the FSA irrigated rental rates and notification efforts by DOC which took place during the last fiscal year, an additional 27 offers have been submitted after September 30, 2011. If processed to complete enrollment, these offers will result in an additional 4,370 acres and an additional 9,352 acre-feet of annual water use appropriation which can be permanently retired. **As of December 15, 2011, the total of approved and offered land now stands at 15,353 acres.**

## **Overview**

The 2007 and 2008 Kansas Legislature approved funding for a Kansas Upper Arkansas River Conservation Reserve Enhancement Program (UAR CREP). The CREP is a United States Department of Agriculture (USDA) program that creates individual rules and special conditions and rates for a geographic region or watershed. The USDA and the Kansas Water Office (KWO) worked with USDA's Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS) to develop and launch the Upper Arkansas River Conservation Reserve Enhancement Program (CREP).

A Memorandum of Agreement (MOA), signed by Kansas Governor Kathleen Sebelius on November 27, 2007 and by Acting USDA Secretary Charles Conner on December 4, 2007, officially established the Kansas Upper Arkansas River CREP.

The Kansas CREP is a voluntary program that provides incentives and cost sharing to participants that enroll their land into eligible conservation practices such as native vegetation establishment or wildlife conservation for a period of 14 to 15 years. The CREP area lies within 10 counties along the Arkansas River corridor, covering 1,571,440 acres. In the CREP area, 718,683 acres were authorized prior to program start-up for ground water irrigation; approximately another 10,680 acres are authorized for irrigation from surface water. Reducing irrigation demands on the stream-aquifer system will help slow the aquifer declines, mitigate the spread of saline waters into the aquifer, and help restore stream and riparian health. The state sought to enroll up to 20,000 acres into the program under the first MOA; 17,000 acres of irrigated land, and 3,000 dryland corners from irrigated circles under the initial MOA. In 2011, FSA approved an expansion of the total project size to 28,950 acres with a target goal of 25,950 irrigated acres to be enrolled.

## **History**

The CREP project area lies within the upper Arkansas River basin. Overall, the target area includes portions of ten counties (Hamilton, Kearny, Finney, Gray, Ford, Edwards, Pawnee, Stafford, Barton and Rice counties) and two groundwater management districts (Southwest Kansas Groundwater Management District No. 3 (GMD3) and Big Bend Groundwater Management District No. 5 (GMD5) along the river corridor. The 1,571,440 acre project area has hydrologic interaction with the Arkansas River due to surface flow and ground water pumping. The main water sources for producers within the project area are local stream / river surface waters, and the alluvial and High Plains aquifers. The Arkansas River flows from headwaters in the Rocky Mountains, and has been diverted for over 100 years for irrigation in Colorado and Kansas. The river and ground water system have had several decades of well-documented flow depletions entering the State of Kansas, and ground water declines in the aquifer are resulting in loss of baseflow to the river, decline in well yields, and in some locations, degradation of ground water quality.

The Arkansas River is a resource of state and national concern for both water quantity and water quality. The flow into Kansas is extensively controlled through releases from the John Martin Reservoir in eastern Colorado, and is managed through the Arkansas River Compact Administration. Reduced flows as the river entered Kansas, in violation of the compact, have historically resulted in stream flow depletion, ground water declines, and economic damage. The river is also one of the most saline in the nation where it enters Kansas, a result of the extensive concentration of salts occurring from irrigation use and reuse. The declining flows and deteriorated water quality threaten the viability of this important surface water source in western Kansas. Correlated with the reduced flow and increasing salinity of the river is the degradation of riparian health and wildlife habitat. Native plant communities have declined, and there has been an extensive and aggressive infestation of tamarisk and other non-native phreatophytes.

## **Kansas-Colorado Arkansas River Compact**

The Kansas-Colorado Arkansas River Compact (Compact) was negotiated in 1948 between Kansas and Colorado with participation by the federal government. Its stated purposes are to settle existing disputes

and remove causes of future controversy between Colorado and Kansas concerning the waters of the Arkansas River, and to equitably divide and apportion between Colorado and Kansas the waters of the Arkansas River as well as the benefits arising from John Martin Reservoir.

Kansas filed an original action in the United States Supreme Court, *Kansas v. Colorado*, No. 105, in 1985 to enforce the terms of the Compact. In 1994, a Special Master appointed by the Court, Arthur J. Littleworth, recommended that the Court determine that Colorado had violated Article IV-D of the Compact by means of post-compact well pumping in Colorado. On May 15, 1995, the Supreme Court agreed. Colorado paid Kansas more than \$35.1 million in damages for Colorado's Compact violations. This money has been deposited in three funds created by statute that specify generally how and where the money will be spent. The acceptable uses of two of these funds are consistent with UAR CREP objectives, while the third is for future litigation. The Water Conservation Projects Fund, now known as the Western Water Conservation Projects Fund, must be applied to projects within a portion of the CREP area.

The Special Master's fifth and final report to the Supreme Court in January 2008, and the Supreme Court "Judgment and Decree" entered on March 9, 2009, provided that the Supreme Court would retain jurisdiction for a limited period while the states evaluated the sufficiency of the 1996 Colorado Use Rules.

As a result of that evaluation, modifications of the initial judgment and decree were jointly developed by Kansas and Colorado based on decisions by the Special Master and the United States Supreme Court. The decree contains several appendices, such as the hydrologic-institutional model and accounting procedures, which will be used to determine if Colorado is in compliance. The states submitted a modified appendix to the Supreme Court on August 4, 2009, bringing an end to the retained jurisdiction.

### **CREP Steering Committee**

The Upper Arkansas River CREP Steering Committee consists of the (KWO), Kansas Department of Agriculture – Division of Conservation (DOC), the Kansas Department of Agriculture - Division of Water Resources (DWR), the Kansas Department of Wildlife, Parks and Tourism (KDWPT), the Kansas Department of Health and Environment (KDHE), and the Kansas Geologic Survey (KGS). These state agencies are joined by the FSA, NRCS, GMD3, GMD5, and Pheasants Forever (PF) (Attachment F).

The Steering Committee met again on September 27, 2011 (Attachment F). Some members attended in the DOC conference room with others linked in by teleconference. The purpose of the Steering Committee was reviewed and the committee was provided an update of the current enrollment. The input of the committee on the success of the CREP program in meeting objectives and ways to improve it will become more and more valuable, as more acres enroll and the impact of the water right retirements and land in a conservation practice begin to become measurable.

The DWR, KGS and GMD3 are working cooperatively to create an enhanced monitoring network for the aquifer close to the retired CREP acres and water rights. Improvements include providing additional annual monitoring wells and increasing the measurement frequency, equipping some key well sites with pressure transducers and temperature loggers, and designating some wells as index calibration wells.

It was again noted that some monitoring activities of the CREP are still premature for the agencies to significantly undertake at this time, or to determine any significant changes in results or impacts due to the CREP project. Even though enrollment is steadily increasing, almost the entirety of the enrollment has been located in areas of the "Tier 1 / Unsuitable soils" which will require continued limited irrigation for another couple of years to establish the vegetative cover. Therefore, there has not yet been substantial water use curtailment to record measurable differences.

The committee was informed of the efforts which Kansas had undertaken to increase enrollment and interest in CREP, including recent rental rate increases and by FSA and amendments to the USDA / State

of Kansas MOA. FSA issued a national press release on August 23, 2011 announcing that the enrollment limit had been increased to 28,950 acres. The committee was pleased that the enrollment limit was being increased to the extent that currently appropriated money is still available, and that revised irrigated rental rates could help attract more participation, especially in the areas of better soils and stable water tables such as the eastern parts of the project area (i.e. Middle Arkansas region).

DOC explained subsequent efforts which were being jointly undertaken with the DWR to re-market and promote the CREP program to eligible irrigators in the CREP area in an attempt to increase enrollment during the fall and winter season. The Steering Committee may convene again in the Spring of 2012 to re-assess the program results prior to renewed summer irrigation.

Although participation in the eastern areas has been disappointing so far, the great merit of the CREP program to date has been realizing a very substantial benefit to the western regions of the project. The extremely sandy and fragile, windblown soils of the sandhills will be very difficult to re-vegetate after the groundwater is depleted and crop production runs out. The CREP program has given these area producers a viable option for starting grass stands while limited irrigation water is still available and with the financial opportunity and incentive to do it. This somewhat unexpected result should be highlighted and warrants consideration of similar ways to possibly better utilize the resources of future CREP programming in the Upper Arkansas River Valley of Kansas.

### **CREP Project Implementation Summary**

The CREP program is designed to protect water quality and extend the usable life of the of the High Plains aquifer by establishing conservation practices on irrigated land and retiring the associated water rights on project lands in Barton, Edwards, Finney, Ford, Gray, Kearny, Pawnee, Rice and Stafford counties. Hamilton County was previously ineligible for the program because it was at a maximum level of acres that could be enrolled in a Conservation Reserve Program (CRP). Those FSA rules regarding the maximum allowable acres specifically pertaining to CREP program enrollment were changed in 2011, and therefore, Hamilton County is now officially eligible for the first time since the program was started. The Kansas Legislature approved the enrollment limit up to a maximum of 40,000 acres; however, the program cap with FSA was initiated at the 20,000 acre level to stay within a legislative stipulation which allows only one acre of land to be enrolled in CREP for every two acres of current CRP contracts which expire annually.

CREP applications are typically made in the county where the land is located, and all applications are considered on a first-come, first-served basis. Farmers who enroll irrigated cropland in the program and permanently retire their water rights will receive rental payments for 14 to 15 years at rates between \$110 and \$140 per acre per year. Rates vary depending on the HUC and irrigation system currently in place. Cost-share funds are available for seeding, and well plugging on enrolled land. Enrolled land can also be leased for hunting. Producers also receive an upfront signing bonus from the state of either \$62 per irrigated acre (Tier 1 Soils) or \$35 per irrigated acre (Tier 2 soils).

The goals of the UAR CREP are to enroll up to 28,950 acres of eligible cropland within the designated area to significantly reduce the amount of irrigation water consumptively used. Water quality will be improved through the reduction of agricultural chemicals and sediment entering waters from agricultural lands, and thereby impeding the spread of poor quality river water into the fresh alluvial and High Plains aquifers. The reduction of water consumption and non-point source contaminants, through permanent retirement of water rights appurtenant to the land enrolled in CREP and the establishment of conservation covers and other resource management practices, will slow the aquifer declines and loss of baseflow, enhance associated wildlife habitat (both terrestrial and aquatic), and conserve energy.

Successfully meeting the goals and objectives of the UAR CREP involves interagency cooperation and adherence to a coordinated implementation plan. The implementation plan covers each agency's

responsibility and the step-by-step process for outreach, processing applications, providing technical assistance, and monitoring success.

The UAR CREP is being implemented through continuous signup on a first come, first priority basis, until a county reaches the CREP program maximum for enrolled acres or the federal limit on CRP acreage enrolled in any one county. The application enrollment pattern in the first year demonstrated high interest in December, 2007, and January and February, 2008, with a peak of over 13,000 acres offered for enrollment. By March of 2008, inquiries slowed, as most landowners had already made decisions on their land if a crop was to be planted during the upcoming season. A number of applications were subsequently withdrawn as some land was sold. Others were also withdrawn as crops were put in, as 2008 was a year of very high commodity prices and escalating land values. There were also a number of applications that ultimately were found to not meet the Federal or State eligibility criteria during the review process. Finally, there were some inquiries that ultimately did not result in applications being filed because it initially appeared that the county cap had already been filled for Kearny and Gray Counties. One state requirement is that no more than 25% of the CREP program acres be in any one county, which in 2008 was a 5,000 acre cap.

As of the end of the first fiscal year on September 30, 2008, a total of 6,377 acres had actually been approved for enrollment in the CREP program. A total of 12,871 acre-feet of authorized water right allocations associated with these acres had been voluntarily and permanently retired. By September 30, 2009 (the end of the second fiscal year), an additional 4,011 acres had been approved for enrollment, bringing the project total to 10,388 acres. An additional 8,208 acre-feet of authorized water right allocations were also retired, bringing the project total to 21,179 acre-feet retired. At the end of the third fiscal year on September 30, 2010, 378 enrolled acres were added (bringing the current project total to 10,766 acres) and an additional 634 acre-feet of authorized water right allocations were also retired. At the end of the fourth fiscal year on September 30, 2011, 247 enrolled acres were added (bringing the current project total to 11,013 acres) and an additional 532 acre-fee of authorized water right allocations were also retired, bring the total to 22,245 acre-feet of authorized water right allocations retired. Most of the enrolled acres are irrigated – 98.7% - and most of these irrigated acres are located in the “Tier 1 /Unsuitable soil” classifications (84.9%) - and essentially all (99.32%) of the acres have been enrolled in the CP2 conservation practice.

### *Outreach*

Public outreach for the UAR CREP was initiated prior to and during the preparation of the project proposal to gather information and assess public support. Many outreach meetings occurred on the UAR CREP throughout western Kansas and during the legislative session. The implementation team developed an informational brochure and poster on CREP for use during the awareness campaign (attachment A). This brochure and related promotional posters were also updated and revised during the third program year, FY2010, and again in the fourth program year, FY2011.

A coordinated approach to outreach and support will continue through implementation of the program. Much of the initial success of the UAR CREP is a result of strong marketing of the program to producers interested in the program. The outreach was accomplished through direct mailings, newspaper press releases, educational brochures, radio broadcasts and local informational meetings. Each of the agencies cooperating in the program was responsible for the outreach component, but the KWO, DOC, GMD3 and GMD5, and the local Conservation Districts were especially instrumental, as identified in Attachment A.

### *Technical Assistance*

Technical assistance is provided to the producers enrolled in the UAR CREP by USDA's NRCS and the DOC. There have been a number of meetings between NRCS and the producers discussing the challenges of transitioning to a permanent cover on soils that are highly susceptible to wind erosion. The majority of the

enrolled acres are in this category. The process for implementing CREP in Kansas (KCREP\_IP\_02) has been modified to indicate the NRCS will meet at the CREP site with the participant (Exhibit C).

A very productive meeting was convened between FSA, NRCS, DOC, KWO, DWR, GMD3, and GMD5 officials in Garden City on February 26, 2009 to discuss the unique challenges, strategies, and techniques of establishing permanent grass covers on highly erodible soils associated with the majority of the CREP enrollment to date. Some very successful grass establishment has now been developed by the end of the 2010 season. NRCS staff has found a strategy involving an effective combination of cover crops, herbicides, irrigation and summer seeding times which has resulted in many circles of nearly 100% CRP grass establishment after just two years. Other county offices are being apprised of the methodologies so that the experience can be re-created in areas where the grass establishment has been difficult.

A second meeting was held on July 7, 2011 in Dodge City at the USDA Service Center with representatives from the same agencies. Discussion at this meeting focused on the progress of the program including establishment of permanent vegetative cover. NRCS reviewed Kansas Conservation Reserve Program Technical Guidance Number 81, "Guidelines for Cover Crop and Grass Establishment on Sandy Sites Associated with Conservation Reserve Enhancement Program Acres". This guidance document has been updated to provide emphasis on the establishment of a cover crop, weed management, irrigation for establishment, and frequent monitoring. NRCS staff expressed their concern with current conditions resulting from the severe drought being experienced in 2011 and the ability of participants to irrigate grass stands for establishment. The full effects of the drought on CREP stands will not be known for a few years, but recent observations are not positive. District Conservationists have reported that some stands considered to be established in 2010 appear to have died in 2011. These stands will need to be evaluated in the following growing seasons to determine their post drought status. There have also been reports from participants that they were unable to irrigate or that their ability to irrigate has been limited. Some were due to their location in areas of the aquifer that are severely drawn down while others only experienced the seasonal draw down of mid and late summer. The current conditions of the drought stricken areas will challenge CREP participant's ability to establish the permanent cover required by the program.

#### *Agency and Organization Cooperation*

The **Kansas Water Office (KWO)**, the state's planning agency for water issues, provides direction for the CREP program development. KWO contributes to public outreach through presentations at the Upper Arkansas Basin Advisory Committee and Kansas Water Authority meetings and to other interested stakeholders. KWO works collaboratively with DOC and each of the agencies identified below to prepare and provide USDA with annual CREP progress reports. The KWO is also the lead on amending the CREP Agreement with USDA. The Director of the KWO originally administered the Water Conservation Projects Fund for projects in the Upper Arkansas River corridor that provide water conservation, efficiency gains and aquifer recharge. Legislative directives from the 2008 session transferred the fund and administrative duties to GMD3. The KWO Director continues to review and give approval for proposed projects recommended by the GMD3 and the Arkansas River Litigation Funds Advisory Committee, with input from the Chief Engineer. The use of these funds is consistent with the purposes of CREP.

The **Kansas Department of Agriculture - Division of Conservation (DOC)** (formerly *State Conservation Commission (SCC)*) coordinates with local groundwater, watershed, & county conservation districts, state & federal agencies, and other conservation partners to implement programs that improve water quality, reduce soil erosion, conserve water and reduce flood potential. DOC administers the state portion of the CREP, and is responsible to contract with eligible participating entities for the state upfront incentive payments (SUPs); to review, and make assurances that all CREP eligibility criteria are met and correctly documented; to assure that the relevant water right is properly and permanently dismissed; and to provide appropriate recommendations regarding final approval of FSA CREP applications. The DOC also administers a similar, solely state funded water right retirement program (Water Transition Assistance Program). DOC utilizes an

existing staff position as the State CREP Coordinator to facilitate and oversee the CREP in the Upper Arkansas basin.

The **Farm Service Agency (FSA)** is the lead USDA agency for CREP. FSA provided the first public announcement of the program signups and made broad outreach to all potentially eligible persons. FSA field office staff work with landowners and producers to determine if CREP is a program that fits for their acreages and circumstances. FSA initiates the contract with interested parties; provides estimates of payments, and works to determine suitable conservation practices. Final approval of contracts comes from the FSA County Committees. FSA has no responsibility for the water right terminations, but coordinates with DOC and DWR as to the sufficiency of the voluntary dismissals.

The **Kansas Department of Agriculture - Division of Water Resources (DWR)** provides verification of water rights in good standing, administration of retired water rights, issuance of term permits, well administrations, and monitoring of aquifer levels and streamflows. The DWR has and will continue to provide legal partitioning of water rights as necessary. This agency assists the Arkansas River Compact Administration with compact compliance. The Chief Engineer of DWR also reviews proposed project applications for water conservation and efficiency in the Upper Arkansas River basin through the former Water Conservation Projects Fund, now known as the Western Water Conservation Projects Fund, in coordination with the Director of KWO. These efforts are consistent with the CREP objectives.

The **Kansas Department of Health and Environment (KDHE)** monitors surface water quality in the Arkansas River and tributaries. Activities include collection and preparation of chemical, bacteriological and radiological lab samples taken from Arkansas River at up to 7 sites located between Coolidge and Great Bend, and analysis for chemistry, microbiology and radiological content of samples. KDHE coordinates water quality issues and meetings with Colorado and other Kansas state agencies, and stakeholders.

The **Kansas Geological Survey (KGS)** provides annual monitoring of aquifer levels. KGS also provides technical studies on the salinity fate and transport, aquifer characterization, and ground water modeling. The KGS maintains a long-term research site for investigating phreatophyte and stream-aquifer interactions in the Arkansas River valley at the USGS gage site northeast of Larned, within the CREP project area. Most of the wells are screened in the alluvial aquifer and a few are screened in the underlying High Plains aquifer. Most of the wells are instrumented with pressure transducers that record water levels on a 15 minute time interval year round. Periodic measurements of specific conductance are made in the wells and at least one sample a year is collected from most of the wells. In future years, data from this site may be used along with other sites with water-level data in the CREP area in conjunction with the model for the Middle Arkansas River subbasin to determine the effect of reduced pumping from CREP on the system.

**Kansas Department of Wildlife, Parks and Tourism (KDWPT)** provides fish and wildlife population monitoring. KDWPT conducts wildlife and habitat surveys through several programs including stream monitoring and assessment and shorebird surveys. KDWPT conducts statewide stream surveys to document the current range and distribution of stream species. Since 2002, KDWPT has coordinated a volunteer effort to survey shorebirds at wetlands throughout Kansas. Portions of these ongoing survey efforts as well as additional wildlife population monitoring activities can serve as in-kind contribution towards the CREP project. KDWPT monitors visitation rates at Cheyenne Bottoms Wildlife Area, to be used in evaluation of a CREP objective.

**Groundwater Management Districts (GMD3 and GMD5)** monitor water levels, collect water quality samples, recommend water management actions to the Chief Engineer, review and advise on water conservation projects in the Upper Arkansas River valley and basin, and promote water conservation. Both GMDs have sponsored stakeholder meetings to help explain and promote the Upper Arkansas River CREP. The GMDs have also provided technical assistance to interested parties on partitioning of water rights or fields to meet both the CREP eligibility criteria and the needs of the producer.

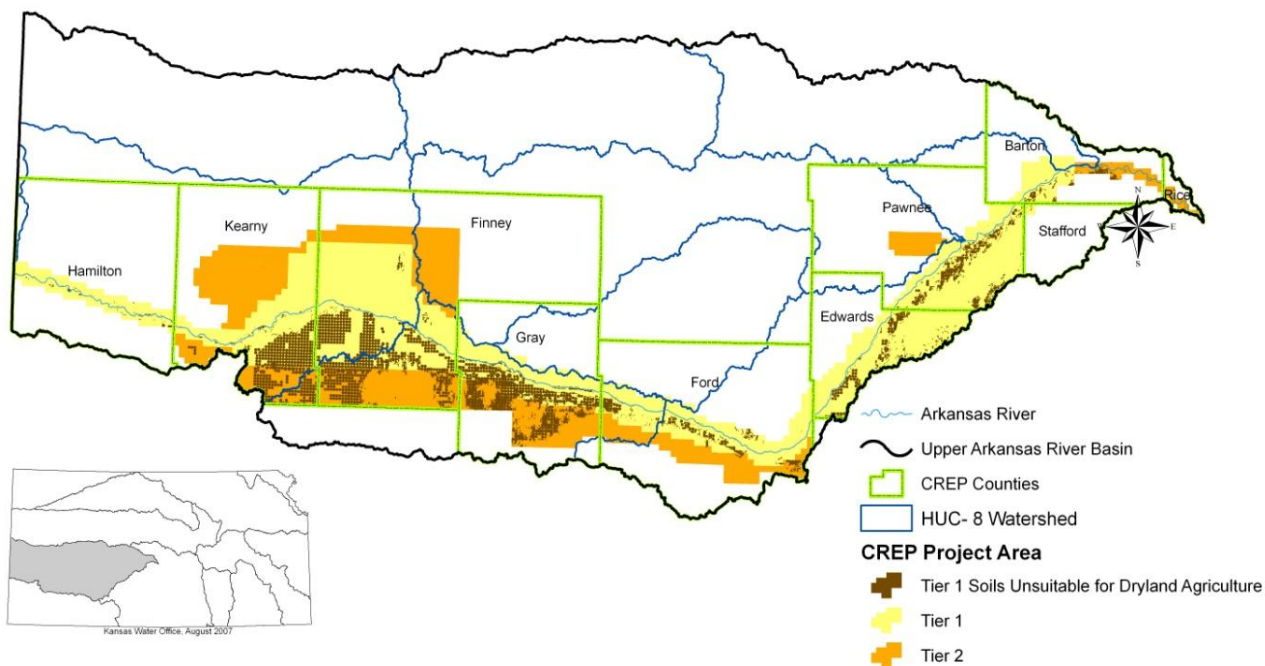
**Kansas State University (KSU)** has provided public outreach support to the cooperating state and local agencies involved with this CREP submission and implementation. Extension agents with expertise in programmatic areas important to the program are available to answer questions posed by users of the program. KSU Cooperative Extension has established outreach networks to transfer important information and results to clientele and end users of program information.

KSU also has the capacity to analyze and interpret economic impacts as the CREP program is further implemented. These changes include both positive and negative impacts in the basin communities. Positive impacts will result from changes in the environment as less water is diverted for irrigation and remains in the stream flow and aquifer, and the useable life of the aquifer is extended. Negative impacts result from decreased economic activity as land is removed from irrigated agricultural production, whether temporary or permanent.

**Natural Resource Conservation Service (NRCS)** provides technical assistance on CREP contracts to create the conservation plan of operations and implement the approved practices. NRCS employees evaluate the offered acres with the applicant to determine the appropriate suite of practices to meet needs of the land and producer. Specifications for practice implementation are documented and provided to the participant on conservation practice worksheets. NRCS personnel then follow-up with participants by making site visits to evaluate progress, and by making recommendations to help with management decisions.

**Pheasants Forever (PF)** is a national non-profit conservation organization dedicated to the conservation of pheasant, quail, and other wildlife. PF members are a diversified group of hunters, non-hunters, farmers, ranchers, landowners, conservation enthusiasts and wildlife officials organized in local chapters who work through fundraising and project development efforts to make a difference by creating habitat, restoring wetlands and protecting prairies. They also promote cooperative endeavors through public awareness, education and land management policies and programs.

**Figure 1: Map of Upper Arkansas River CREP Eligible Project Area**



### Land Conserved

As of September 30, 2011, the total amount of land which has been offered and approved for enrollment into the CREP program is 11,013 acres, as detailed in the table below (see maps of CREP counties showing location of acres enrolled in Attachment D).

| <b>Acres Approved for Enrollment: December 20, 2007 to September 30, 2011</b> |  |  |  |  |  |
|---|--|--|--|--|--|
| <b>CREP County</b>  | <b>Acres Approved December 20, 2007 – September 30, 2008</b> | <b>Acres Approved October 1, 2008 – September 30, 2009</b> | <b>Acres Approved October 1, 2009 – September 30, 2010</b> | <b>Acres Approved October 1, 2010 – September 30, 2011</b> | <b>Total Acres Approved since Program Initiation</b> |
| Barton  |  |  |  |  |  |
| Edwards   |  |  |  |  |  |
| Finney  | 129  | 1,137  | ( - 494)*  |  | 772  |
| Ford  |  |  |  |  |  |
| Gray  | 1,802  | 2,018  | 872  | 247  | 4,939  |
| Hamilton  |  |  |  |  |  |
| Kearny  | 4,205  | 856  |  |  | 5,061  |
| Pawnee  | 241  |  |  |  | 241  |
| Rice  |  |  |  |  |  |
| Stafford  |  |  |  |  |  |
| <b>Total</b>  | <b>6,377</b>   | <b>4,011</b>   | <b>378</b>   | <b>247</b>   | <b>11,013</b>  |

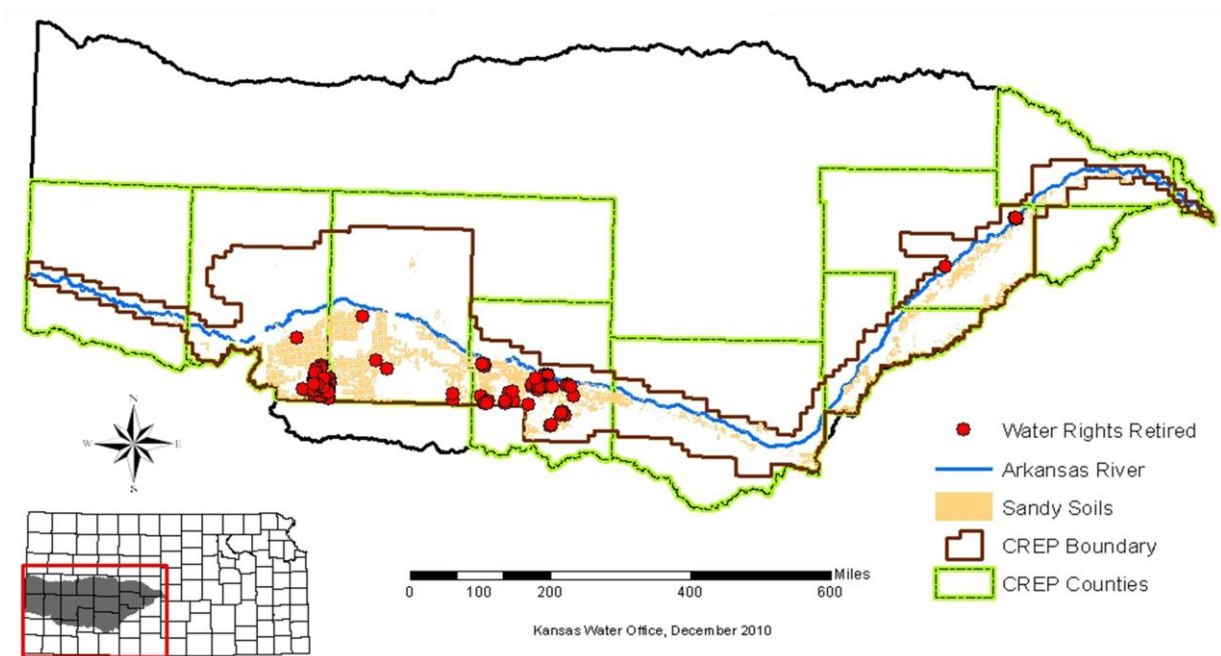
\*494 acres were withdrawn from state contracts prior to final CRP-1 approval by FSA

### Water Conserved

The total amount of water rights which have been offered and accepted for permanent retirement under state approved contracts from the beginning of enrollment on December 20, 2007 through September 30, 2011 are shown in the table below. In total, 22,245 acre-feet of authorized water right allocation has been permanently retired from irrigation through enrollment into the Upper Arkansas River CREP.

| <b>CREP Authorized Water Right Allocation Permanently Retired</b> |   |  |
|---|---|--|
| <b>CREP County</b>  | <b>Authorized Quantity (Acre-Feet) of Water Right Allocation Permanently Retired on State Contract Approved Acres</b> | <b>Number of Irrigation Wells Being Permanently Retired on State Contract Approved Acres</b> |
| Barton  |   |  |
| Edwards   |   |  |
| Finney  | 926 AF  | 5  |
| Ford  |   |  |
| Gray  | 10,429 AF   | 43   |
| Hamilton  |   |  |
| Kearny  | 10,483 AF   | 39   |
| Pawnee  | 407 AF  | 8  |
| Rice  |   |  |
| Stafford  |   |  |
| <b>Total</b>  | <b>22,245 AF</b>  | <b>95</b>  |

**Figure 2: Map of Upper Arkansas River CREP Retired Water Rights**



### *Ground Water Monitoring Activities*

The majority of the acres enrolled in the Upper Arkansas CREP (83%) are requiring limited irrigation to get a permanent vegetative cover established on soils highly susceptible to wind erosion. Therefore, there will still be minimal reductions in pumping which will likely be reflected in the last measurements from the annual groundwater level monitoring program (January, 2011). Many of the additional acres approved during FY2009, FY2010, and FY2011 did not get contracts established until mid-year. However, ground water level measurements and annual water use reports are being collected for the CREP project area (average groundwater levels and a map of the location of monitoring wells are provided in Attachment E.

Water levels have been monitored at least annually at numerous locations in the CREP counties. Figure 3 includes the locations of historical water level measurements in the area. GMD5 obtains water level measurements from 25 wells in the CREP area. Annual measurements are collected from 14 of these wells and quarterly measurements of 11 wells are planned to continue.

Water levels within the boundaries of the CREP area, particularly in the areas where contracts are approved, will be measured over time. One option is to compare monitored changes with predicted changes based on the Middle Arkansas subbasin and GMD3 computer modeled scenarios. The Kansas Geological Survey is also working cooperatively with the DWR and GMD3 to enhance the monitoring network for the aquifer close to the retired CREP acres and water rights in Kearny, Finney and Gray counties. Improvements include providing additional annual monitoring wells and increasing the measurement frequency, equipping some key well sites with pressure transducers and temperature loggers, and designating some wells as index calibration wells. Since a great deal of the enrollments in Gray and Kearny counties are in very close proximity, the establishment of such an enhanced monitoring program would result in some very specific information about the effects of substantial water right retirements in these highly localized areas.

*Annual Irrigation Water Usage in CREP Area: 2007 - 2010*

Water use reports of authorized acres actively being irrigated each year have been received and verified by the Kansas Department of Agriculture-Division of Water Resources for the 2007 – 2010 reporting years. Reported irrigation water use and the number of actual irrigated acres within the CREP Project Area for 2007, 2008, 2009 and 2010 are shown in the table below.

| <b>CREP Project Area Reported Irrigated Water Use and Irrigated Acres: 2007 - 2010</b> |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| <b>County</b>  | <b>2007<br/>Reported<br/>Irrigated<br/>Acres in<br/>CREP<br/>Project Area</b> | <b>2007<br/>Irrigation<br/>Reported<br/>Water Use<br/>(AF) in CREP<br/>Project Area</b> | <b>2008<br/>Reported<br/>Irrigated<br/>Acres in<br/>CREP<br/>Project Area</b> | <b>2008<br/>Irrigation<br/>Reported<br/>Water Use<br/>(AF) in CREP<br/>Project Area</b> | <b>2009<br/>Reported<br/>Irrigated<br/>Acres in<br/>CREP<br/>Project Area</b> | <b>2009<br/>Irrigation<br/>Reported<br/>Water Use<br/>(AF) in CREP<br/>Project Area</b> |
| Barton   | 16,599  | 15,898  | 15,687  | 15,157  | 16,415  | 15,133  |
| Edwards  | 35,741  | 30,375  | 36,128  | 38,681  | 36,313  | 35,896  |
| Finney   | 204,649   | 248,916   | 200,856   | 293,357   | 197,894   | 238,180   |
| Ford   | 42,898  | 44,833  | 41,822  | 58,260  | 41,213  | 44,889  |
| Gray   | 81,547  | 94,995  | 82,232  | 105,570   | 81,916  | 92,088  |
| Hamilton   | 10,899  | 13,270  | 12,570  | 19,424  | 12,679  | 15,707  |
| Kearny   | 86,387  | 126,609   | 106,934   | 191,013   | 110,314   | 165,931   |
| Pawnee   | 48,709  | 38,983  | 49,792  | 41,714  | 49,550  | 44,233  |
| Rice   | 336   | 281   | 331   | 221   | 331   | 230   |
| Stafford   | 628   | 601   | 628   | 552   | 628   | 695   |
| <b>Total</b>   | <b>528,393</b>  | <b>614,761</b>  | <b>546,980</b>  | <b>763,950</b>  | <b>547,253</b>  | <b>652,982</b>  |
| <b>CREP Project Area Reported Irrigated Water Use and Irrigated Acres: 2007 - 2010</b> |   |   |   |   |   |   |
| <b>County</b>  | <b>2010<br/>Reported<br/>Irrigated<br/>Acres in<br/>CREP<br/>Project Area</b> | <b>2010<br/>Irrigation<br/>Reported<br/>Water Use<br/>(AF) in CREP<br/>Project Area</b> |   |   |   |   |
| Barton   | 16,064  | 17,621  |   |   |   |   |
| Edwards  | 36,875  | 38,534  |   |   |   |   |
| Finney   | 196,224   | 271,887   |   |   |   |   |
| Ford   | 41,788  | 47,235  |   |   |   |   |
| Gray   | 79,321  | 96,563  |   |   |   |   |
| Hamilton   | 12,585  | 18,235  |   |   |   |   |
| Kearny   | 103,754   | 168,632   |   |   |   |   |
| Pawnee   | 50,130  | 53,645  |   |   |   |   |
| Rice   | 331   | 369   |   |   |   |   |
| Stafford   | 628   | 787   |   |   |   |   |
| <b>Total</b>   | <b>537,700</b>  | <b>713,514</b>  |   |   |   |   |

## Summary of Non-Federal Program Expenditures

The total federal costs of the program to date are \$19,667,225. The State of Kansas, with its partners of other agencies, Conservation Districts, Groundwater Management Districts, and Pheasants Forever have provided a cost share that meets or exceeds the required 20% match of federal costs. The State of Kansas agreed to pay not less than 20% of the program costs, as required for a CREP program, through a combination of direct payments, technical assistance and in-kind contributions. No less than 10% of this match is in direct payments. Since December 6, 2007, a total of \$5,889,685.06 of non-federal expenditures has been made in support of the CREP project. The Kansas state direct match now totals \$4,338,038.38 with \$665,260.78 having being paid to producers for sign-up incentives on enrolled irrigated acres.

| <b>Direct Match to Federal Dollars from October 1, 2010 to September 30, 2011</b> |                       |  |
|---|-----------------------|--|
| <b>Organization</b>   | <b>Amount</b>         | <b>Activities</b>  |
| KDA – Division of Conservation*<br>State Upfront Payments                         | \$15,320.20           | State Sign-up-payments to CREP participants.   |
| State CREP Coordinator  | \$88,866.00           | Coordinate implementation of program with FSA, Conservation Districts, NRCS, and state agencies. |
| KDA – Division of Conservation*   | -                     | Cost share on well plugging and other allowed practices.   |
| Western Water Conservation Project Funds  | \$1,189,383.50        | Alternate Delivery route, Lake McKinney storage capacity and bypass                              |
| Pheasants Forever/Quails Forever  | -                     | Cost share on seeding; loan of grass seeder.   |
| Kansas Water Office   | -                     | Cost share on tamarisk control, or wetland bonus payments  |
| <b>TOTAL DIRECT</b>   | <b>\$1,293,569.70</b> |  |

\*The KDA – Division of Conservation was formerly the State Conservation Commission

| <b>State Upfront Payments Approved by County**</b> |  |                                       |                                       |                                       |                     |
|--|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------|
| <b>COUNTY</b>                                      | <b>State Upfront Payments SFY 2008</b> | <b>State Upfront Payments SFY2009</b> | <b>State Upfront Payments SFY2010</b> | <b>State Upfront Payments SFY2011</b> | <b>COUNTY TOTAL</b> |
| Barton   |  |                                       |                                       |                                       |                     |
| Edwards  |  |                                       |                                       |                                       |                     |
| Finney   | \$8,022.80                             | \$33,756.30                           | \$2,677.50                            |                                       | <b>\$44,456.60</b>  |
| Ford   |  |                                       |                                       |                                       |                     |
| Gray   | \$156,954.90                           | \$44,856.38                           | \$75,618.30                           | \$15,320.20                           | <b>\$292,749.78</b> |
| Hamilton   |  |                                       |                                       |                                       |                     |
| Kearny   | \$260,632.50                           | \$37,510.00                           | \$15,620.90                           |                                       | <b>\$313,763.40</b> |
| Pawnee   | \$14,291.00                            |                                       |                                       |                                       | <b>\$14,291.00</b>  |
| Rice   |  |                                       |                                       |                                       |                     |
| Stafford   |  |                                       |                                       |                                       |                     |
| <b>TOTAL</b>                                       | <b>\$439,901.20</b>                    | <b>\$116,122.68</b>                   | <b>\$93,916.70</b>                    | <b>\$15,320.20</b>                    | <b>\$665,260.78</b> |

\*\*These figures reflect the State of Kansas Fiscal Years from program start date on December 20, 2007 through September 30, 2010

As of September 30, 2010, a total of \$665,260.78 has been expended by the Division of Conservation for the State Upfront Payments (SUPs) in 67 separate state contracts to producers who have been approved and enrolled in the CREP program. Based on these 67 contracts, producers will receive approximately \$1,300,000 in direct payments the FSA annually over the 14-15 year period of the CREP contract. Producers may also receive other cost-share help from FSA.

| <b>Services by Organizations from October 1, 2010 to September 30, 2011</b> |                     |   |
|---|---------------------|---|
| <b>Organization</b>   | <b>Actual</b>       | <b>Activities</b>   |
| <b>Technical Assistance</b>   |                     |   |
| Western Water Conservation Projects Fund Management                         | \$46,985.00         | Preferred interstate, grant applications, general TA water rights, laws and issues  |
| KDA – Div. of Water Resources   | \$2,891.54          | CREP database maintenance, water right reviews, divisions and retirements for applications.   |
| Kansas Geological Survey  | \$88,700.00         | Water level monitoring, database management, phreatophyte investigations, TA, water right communication, modeling, river water quality and practical saturated thickness work |
| Kansas Dept of Wildlife, Parks and Tourism                                  | \$14,191.12         | Wildlife and Fish population investigations in CREP counties.   |
| Kansas Conservation Districts   | -                   | No activity to report   |
| <b>State &amp; Local In-kind</b>  |                     |   |
| KDA – Div. of Conservation*   | \$1,189.45          | Outreach  |
| Water Conservation Projects Fund  | \$3,675.00          | Alternative delivery system, storage capacity, and efficiency improvements (ARLFSC time)  |
| Big Bend Groundwater Management District #5                                 | \$40,000.00         | Water level measurements, meter compliance, water banking, CREP assistance and clerical pay.  |
| Southwest Kansas Groundwater Management District #3                         | \$100,829.70        | Water management, stakeholder assistance in CREP area, program promotion  |
| Kansas Department of Health and Environment                                 | \$14,348.13         | Ark River Coordination with Colorado, Sampling of Ark River water quality.  |
| Kansas Water Office   | \$5,937.52          | Weather modification and phreatophyte, and CREP activities  |
| <b>TOTAL TA / In-Kind</b>   | <b>\$318,747.46</b> |   |

\*The KDA – Division of Conservation was formerly the State Conservation Commission

### **Progress on CREP Objectives (12 objectives)**

1. Enroll a maximum of 28,950 acres into CREP in the project priority area (25,950 irrigated acres, 3,000 from dryland pivot corners as part of whole field enrollment), with a goal of up to 18,600 acres put into native grass.

*As of September 30, 2011, a total of 11,013 acres have been offered, accepted and enrolled into the CREP program. Of the total number of acres currently offered, only 1.4% (162 acres) was farmed dryland. Offers which are predominately “Tier 2 soils” comprise 15.1 % (1,679 acres) of the total approvals to date. All others are either “Tier 1” or “Tier 1/ Unsuitable” soils – the vast majority of*

*these are in the “Tier 1 Unsuitable” classification. 99.32 % of the acres (10,935.5) are enrolled in the CP2 practice, 0.6% of the acres (67.90) are enrolled in the CP4D practice, and 0.08% of the acres (9.6) are enrolled in the CP10 practice.*

2. Reduce the application of ground water for irrigation in the targeted area by 45,125 acre-feet, annually, with the enrollment of 25,950 irrigated acres.

*As of September 30, 2011, a total of 22,245 acre-feet of authorized water rights for irrigation have been permanently retired. This rate is averaging just over 2 acre feet per acre, a rate higher than estimated in the CREP objective, particularly because the majority of the enrollment in the project area has been in the western counties where the water appropriation allowances are the highest in the state, and some irrigated acreage is authorized on land which is not being enrolled at the irrigated rate due to FSA restrictions.*

3. Increase the frequency of meeting minimum desirable streamflows in the Arkansas River at the USGS gaging stations at Great Bend and Kinsley by 2020 from 71% and 52%, respectively, as measured in 1996-2004.

*No assessment of this objective has been made as of September 30, 2011. Measurement of the impact of enrollment of acres into the Upper Arkansas River CREP on minimum desirable streamflow will begin after water rights have been terminated and sufficient time has elapsed to have an effect on the system. Most of the acres enrolled have just recently terminated the water rights, or are still allowed temporary limited irrigation to establish vegetation on soils susceptible to wind erosion. Following is a summary of the anticipated methodology for this objective.*

*There are three components to streamflow: frequency, magnitude and duration. Each of these components will be reviewed at the Great Bend and Kinsley MDS gage. The daily flow from 1960 to 2004 will be summarized into annual data. The summarization parameters include:*

1. *The percent of time the MDS was not met (frequency of excursion).*
2. *The volume of flow less than MDS as calculated by the difference between MDS and reported flow (magnitude of excursion).*
3. *The maximum length in consecutive days that MDS was not met (duration of excursion).*

*The frequency, magnitude and duration for which MDS was not met will be compared for the pre-CREP years (1960–2006) to the post-CREP years (2007-2012). A nonparametric test, the Wilcoxon rank-sum, will be used to determine if a statistically discernible difference existed between the pre and post-CREP period.*

*The same comparison will be made using the pre and post-CREP period and the average annual Palmer Drought Severity Index (PDSI) for the region in which the MDS gage was located. This will create an index for the antecedent moisture conditions that will be a primary factor in determining each period's flow condition. One would expect that in those regions where the PDSI had become significantly greater (wetter), one should see a concomitant improvement in the magnitude, frequency or duration of the MDS condition.*

*Finally, the trend for the annual summarizations of the three components of flow will be assessed. This assessment will be used to determine whether there is a discernible trend in the annual frequency, magnitude or duration of minimum desirable stream flows through time (1960-2005).*

4. Reduce stream flow transit losses due to inefficiencies in the delivery of the water by improving the channel and canal delivery system.

No official assessment of this objective has been made as of September 30, 2011. Improvements to the stream flow delivery system are underway. Construction is complete on the cleaning and reshaping of the canal used by the South Side Ditch Company to enhance delivery of water to its members and to more efficiently deliver water to the downstream Farmers Ditch Company during a drought. It's estimated that water delivery to the Farmers Ditch Company via the refurbished canal has at least 15 percent less stream flow transit loss than delivery via the river channel.

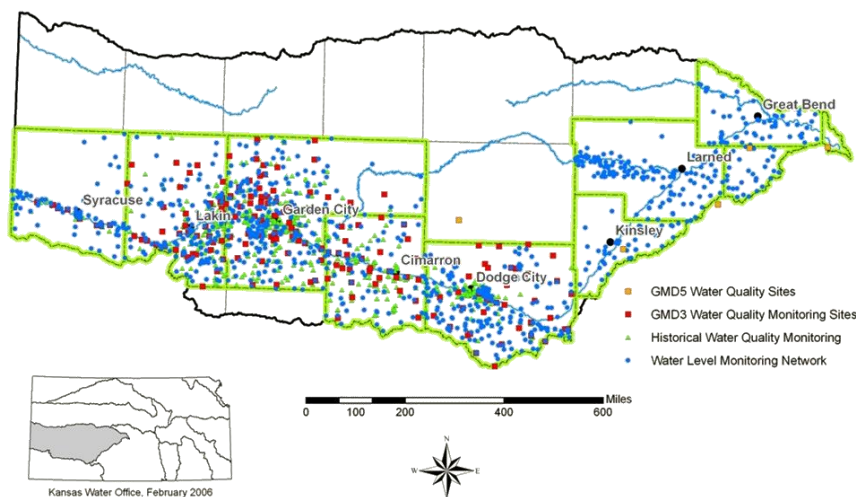
5. Reduce the rate of ground water declines in the alluvial aquifer and the hydraulically connected High Plains aquifer in the CREP area by 2020 from those measured during the winter months for the past five years (2001 – 2005) and ten years (1996-2005).

No assessment of this objective has been made as of September 30, 2011. The impact of enrollment of acres into the Upper Arkansas River CREP on ground water conditions will be made after water rights have been terminated. At the present time, limited irrigation is still provided on many of the enrolled acres to help establish vegetation, where the soils are highly susceptible to wind erosion. Following is a summary of the anticipated methodology for this objective.

Water levels have been monitored at least annually at numerous locations in the CREP counties. The map below includes the locations of historical water level measurements in the area. GMD5 obtains water level measurements from 25 wells in the CREP area. Annual measurements are collected from 14 of these wells and quarterly measurements of 11 wells are planned to continue. Data collected from each of these measurements will be used to assess the progress towards meeting this objective.

Water levels within the CREP area, particularly in the areas where contracts are approved, will be measured over time. Depending on levels of change, monitored changes could also be compared with predicted changes with computer modeled scenarios. The steering committee is cooperating to create an enhanced monitoring network for the aquifer close to the retired CREP acres and water rights. Possible improvements mentioned include providing additional annual monitoring wells and increasing the measurement frequency, equipping some key well sites with pressure transducers and temperature loggers, and designating some wells as index calibration wells.

**Figure 3: Upper Arkansas River CREP Water Quality and Water Level Monitoring (Ground water quality and water level well locations within the CREP counties.)**



6. Reduce the outward migration of river salinity within the High Plains aquifer by 2020 from the currently projected extent based on 1990s ground water conditions in the Arkansas River valley.

*As of September 30, 2011, 11,013 acres have been offered, approved and enrolled into the CREP program. Some of the offered acres are close to the stream, and most are south of the river. An assessment of this objective will be made in the future, once more acres are enrolled, and when most of the wells are permanently turned off. A number of the wells are still in use for limited irrigation to help establish permanent vegetative cover. While no formal assessment of this objective is made at this time, the state's comprehensive water quality monitoring network, as described below, will be used to determine progress in meeting this objective.*

*Instream water quality and ground water quality have been recorded historically through monitoring programs at the state and local level. KDHE has a long-standing network of monitoring stations along the Arkansas River from Coolidge to Great Bend. These stations are the foundation for the TMDL work in the Upper Arkansas Basin. Three years (2004 – 2006) of intensive bacteria sampling have been conducted with over 12 sessions of sampling 5 times within 30 days at these stations on the Arkansas River, in accord with K.S.A. 82a-2001, et seq. KDHE has been developing additional TMDLs in the Upper Arkansas Basin in 2011 for the next round of TMDLs on the Arkansas River.*

*The existing stations will be used to assess future post-TMDL conditions, over the 15 years CREP enrollment period. It is not expected that CREP will have an impact on the overall TDS (Total Dissolved Solids) levels in the river, however improvement is expected in the reduction of the advance of TDS or sulfate into the fresh water aquifers laterally from the river.*

*Annual ground water sampling was again temporarily suspended by GMD3 for the 183 monitoring sites in the CREP counties this report period. They were replaced by 40 additional ground water samples collected for analysis of uranium in the CREP area by the KGS, including the regular suite of analysis. This work was done as a cooperative enhancement in addition to a river flow sampling cooperative agreement with the KGS under an EPA Grant, looking at the deposition of uranium in Arkansas River flows. This work should broaden the water quality evaluations of CREP benefits and future management progress.*

*Further east, ground water quality monitoring in the area by GMD5 has been conducted for specific projects from 12 wells. This information can provide a basis for comparison in the future.*

*This data will provide water quality data from before CREP and the continuing monitoring program will enable data analysis to occur documenting impacts of the program. These, along with the ground water monitoring for various state initiatives, provide a baseline for post-CREP comparison. Stream and ground water samples will be analyzed to determine mineral content at a frequency appropriate to determine representative water quality at least on an annual basis. Sulfate, selenium and total dissolved solids will be quantified at a minimum. Ground water samples will be obtained for analysis and result comparison from wells with an analysis history. Wells with previous data will be monitored from both the alluvial and High Plains aquifers.*

7. Reduce the bacterial, nutrient and pesticide levels in the Arkansas River in Edwards and Pawnee Counties by 2020 from the 1990 – 2000 levels.

*Bacterial impairments under the new state definition are in the middle reaches of the basin. Intense sampling for bacteria after 2015, concentrating on the Kinsley area, is planned. Additional data will be available through the monitoring network as described in Objective #6. However, an assessment of this objective will not be made at this time.*

*As of September 30, 2011, 241.7 acres have been enrolled into the CREP program in Pawnee County. No acres have yet been offered in Edwards County.*

8. Increase aquifer recharge and wildlife habitat by enrolling 400 acres of playa lakes and soils, and other suitable locations for shallow water development.

*As of September 30, 2011, no acres have been formally offered for the CP9 Shallow Water Areas practice. However, approximately 8 acres of playa soils occur on acres offered into the CREP program.*

9. Reduce agricultural use of highly erodible soils with a goal of enrolling 7,000 acres that are unsuitable for dryland farming.

*As of September 30, 2011, approximately 8,986 acres of soils unsuitable for dryland farming have been enrolled in the CREP program. More than 100% of this objective has been met.*

| <b>Acres Enrolled as of September 30, 2010</b> |               |
|--|---------------|
| Tier 1   | 348           |
| <b>Tier 1 Unsuitable Soils</b>                 | <b>8,986</b>  |
| Tier 2   | 1,679         |
| <b>Total Acres Enrolled</b>                    | <b>11,013</b> |

10. Reduce the amount of soil lost to erosion by approximately 80,000 tons per year on all acres enrolled in CREP.

*Soil erosion in the Upper Arkansas River Basin occurs primarily due to wind erosion. Water erosion is also a factor in soil erosion in the basin, but to a lesser extent. In comparison, wind erosion can reach 4 tons/acre whereas water erosion would total 0.3 ton/acre on the same soil types with the same cropping patterns and management practices. Factors that affect wind erosion include residue cover, field width, crop rotation intensity, and tillage operations (USDA 2006).*

*With 11,013 acres enrolled in the CREP program as of September 30, 2011, the amount of soil lost to erosion will be reduced by about 44,052 tons per year. Approximately 55% of this objective has been met. On all highly erodible soils, as determined by a soil I factor of 134 or greater, limited irrigated for up to two full calendar years will be a condition on the water right termination, to help establish vegetative cover. Prior to final contract approval, a conservation plan of operation will be prepared, and limited irrigation may be recommended.*

| <b>Soil Erosion</b>                 |                    |
|-------------------------------------|--------------------|
| 4 tons / acre/ year                 | 10,766 acres       |
| <b>Total soil erosion reduction</b> | <b>44,052 tons</b> |

11. Protect the ecological and recreational viability of the Cheyenne Bottoms with improved Arkansas River stream flow, as measured by an increase in the average, annual bird count at the Bottoms in 2015-2023 as recorded from 1996-2004, and with increased human visitation rates in 2015-2023 as recorded from 1996-2004.

*No assessment of this objective has been made as of September 30, 2011. The impact of enrollment of acres into the Upper Arkansas River CREP on the ecological and recreational viability of*

*Cheyenne Bottoms will not be discernible until water rights have been terminated and wells turned off. Many application acres just recently had the associated water rights terminated, or have limited irrigation to establish permanent vegetative cover. Monitoring of the average annual bird count and human visitation rates will continue.*

12. Reduce energy consumption from an average of 59,850 kW-hr to less than 5,000 kW-hr per pivot for the first two years on pivots enrolled in the CREP. In subsequent years, energy consumption will be reduced to zero, as the pivots eligible for limited irrigation will be removed from the enrolled parcel. Total energy savings for the term of the CREP contracts will approach 8 million kW-hr.

*KSU Research and Extension staff provided a rough estimate of energy consumption for a 125 acre center pivot in counties along the Upper Arkansas River. An average energy consumption of 59,850 kW-hr per pivot per year was derived from their estimates.*

*In the first two years of the program, offers made for acres that occur in soils unsuitable for dryland agriculture will have the opportunity to irrigate minimally to ensure establishment of grass cover. Therefore, a small amount of energy consumption will still be realized in the first years of the program.*

*With 11,013 irrigated acres enrolled in the CREP program as of September 30, 2011, more than 4 million kW-hr of energy savings may be achieved each year. Approximately 64% of this objective has been met.*

| <b>Energy Savings</b>                             |                     |
|---|---------------------|
| Irrigated Acres Enrolled as of September 30, 2010 | 11,013 acres        |
| Approximate Number of Center Pivots Retired       | 86 pivots           |
| Average Energy Consumption per Pivot              | 59,850 kW           |
| <b>Total Energy Savings per Year (kW)</b>         | <b>5,147,100 kW</b> |

# ATTACHMENT A UPPER ARKANSAS RIVER CREP BROCHURE & POSTER

## ELIGIBILITY CRITERIA

Federal and state eligibility criteria must be met to enroll your land in CREP. This partial list of the criteria will help to screen your eligibility in advance. Your local FSA office has a data base to screen your application on these criteria.

1. At least one-half acre foot of water per acre was applied four out of six years (1996-2001).
2. At least 50 percent of the maximum annual quantity authorized to be diverted under the water right has been used in any three years from 2001 through 2005.
3. Half or more of the offered land must be located within the CREP boundary.

## BENEFITS TO FARMERS

- Federal annual irrigated rental and maintenance payments for 14 to 15 years.
- Rental payment on dryland cropland (i.e., center pivot corners) that's part of a whole field enrollment. State upfront payment of up to \$62 per irrigated acre.
- 50 percent cost share on seeding.
- Pheasants Forever offers to provide up to \$500 per producer to offset farmers' seeding costs.
- Well plugging cost share of \$1,000/well.
- Bonus payment of \$350/acre for shallow water area development in Kearney or Finney Counties.
- Land can be leased for hunting.

## 1-2-3 OF SIGN-UP

As you decide whether CREP enrollment fits your business plan, you'll be working with the USDA-Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS) and the State Conservation Commission (SCC).

1. First stop is your local FSA office. FSA personnel will use a CREP data base to determine whether at least half of the irrigated land offered for enrollment lies within the CREP boundaries and if minimum water use criteria have been met. They also will be able to provide eligible producers with a preliminary estimate of rental and upfront payments.
2. Any questions on water rights will be referred to the KDA-Division of Water Resources or Groundwater Management District No. 3 or 5. Producers whose land is accepted into the voluntary program are expected to permanently retire the associated water right(s).
3. The State Conservation Commission will make the state's upfront payments and practice cost share payments on approved CREP contracts.

## ARK RIVER CREP PARTNERS

Working partners include: USDA Farm Service Agency, State Conservation Commission, Natural Resources Conservation Service, Southwest Kansas GMD No. 3, Big Bend GMD No. 5, Pheasant Forever, KGS, KDHE, KDA-DWR and KWO.



CREP Field, Kearney County

### FOR MORE INFORMATION CONTACT:

Steve Frost, CREP Coordinator,  
State Conservation Commission,  
(785) 296-3600, [STEVE.FROST@SCCS.KS.GOV](mailto:STEVE.FROST@SCCS.KS.GOV)  
Carla Wilkoff, USDA-FSA,  
(785) 529-3534, [CARLA.WILKOFF@KS.USDA.GOV](mailto:CARLA.WILKOFF@KS.USDA.GOV)

### APPLICANTS WATER RIGHT QUESTIONS:

Kansas Department of Agriculture;  
Water Resources Division (785) 296-6081  
GMD No. 3, Garden City, (620) 275-7147  
GMD No. 5, Stafford, (620) 234-5352

### FARM SERVICE AGENCIES (FSA)

|          |                |
|----------|----------------|
| Barton   | (620) 792-3329 |
| Edwards  | (620) 659-3142 |
| Finney   | (620) 275-0211 |
| Ford     | (620) 227-3731 |
| Gray     | (620) 855-3515 |
| Hamilton | (620) 384-6955 |
| Kearney  | (620) 355-7911 |
| Pawnee   | (620) 285-2821 |
| Stafford | (620) 549-3321 |
| Rice     | (620) 257-5184 |

# Upper Arkansas River CREP

## CONSERVATION RESERVE ENHANCEMENT PROGRAM

Water and Soil  
conservation in the  
Upper Arkansas  
River corridor

**NEW 2011  
Enhancements**

**SIGN UP  
TODAY**

AT YOUR LOCAL-USDA-FARM  
SERVICE AGENCY OFFICE

Forbes Indian Grassland, NRCS 2007

## WATER AND SOIL CONSERVATION IN THE UPPER ARKANSAS RIVER CORRIDOR

The Conservation Reserve Enhancement Program affords potential benefits for both farmers and land and water resources in 10 counties along the upper Arkansas River. Landowners who enroll in CREP will receive up to 15 years of rental payments, a state sign-up bonus, and state, federal and private cost-share dollars to put irrigated acres into a conservation planting. The water rights associated with the enrolled land will be permanently retired. Enrollment is on a first-come, first-served basis. Program enrollment is only assured through June, 2011 at this time.

### What is CREP?

CREP is a targeted, enhanced Conservation Reserve Program (CRP), a federal program administered by the USDA's Farm Service Agency (FSA). CRP was designed to prevent soil erosion, but also has provided water quality and wildlife habitat benefits. CREP allows the focus to be on a state resource concern; in this case, water conservation.

### What are the water and soil benefits?

Reducing irrigation demands on the stream-aquifer system will slow aquifer declines. It will also reduce the spread of saline river water into the aquifer and help restore stream and riparian health. Most acres enrolled have highly erodible, sandy soils.

Multi-year transition with limited irrigation allows establishment of cover vegetation. This program provides cash payments for land transition, while irrigation is still possible. Continued, irrigation is permitted to establish a suitable land cover.

Among the approved practices eligible for cost share money are native grass seeding, wildlife habitat establishment, shallow water area construction, wetland restoration and filter strip and riparian buffer installation.

### Are there targeted areas?

The program places priority on acreage where the retirement of the land and attendant water rights would have the greatest water conservation benefit and protect highly erodible soils.



Arkansas River during high flow in 1995 at Dodge City.

Arkansas River dry river bed as it appears now at Dodge City.

### Are there wildlife benefits?

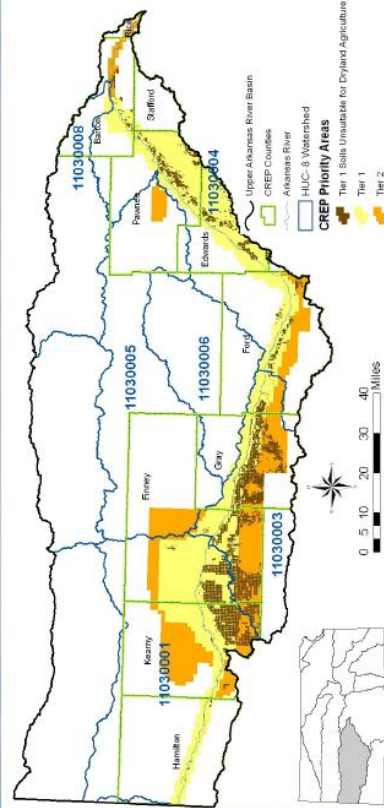
The conservation practices to be implemented open a host of opportunities for wildlife and landowner revenue related to hunting, bird watching and other forms of eco-tourism.

## NEW IN 2011

**INCREASED FEDERAL RENTAL PAYMENTS!**  
\$115 TO \$140 PER ACRE UP TO 15 YEARS  
**EXPANDED CREP ENROLLMENT CAP!**

### Upper Arkansas River CREP

(Rental rates for irrigated land are keyed to the Hydrologic Unit (HUC-8 Watershed))



| Irrigated Rental Rate per Acre by HUC-8 Watershed* |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| HUC-8 Watershed                                    | 11030001 | 11030003 | 11030004 | 11030005 | 11030006 |
| Center Pivot and Subsurface Drip                   | \$120    | \$125    | \$140    | \$130    | \$135    |
| Flood  | \$115    | \$120    | \$130    | \$120    | \$125    |

# Upper Arkansas River CREP

**CONSERVATION RESERVE ENHANCEMENT PROGRAM:**  
*Water and soil conservation in the  
Upper Arkansas River corridor.*

**NEW 2010 ENHANCEMENTS**  
**INCREASED FEDERAL RENTAL PAYMENTS!**  
**\$115 TO \$140 PER ACRE OVER 14 TO 15 YEARS .**  
**EXPANDED CREP ENROLLMENT CAP!**

## BENEFITS TO FARMERS

- UPFRONT PAYMENT OF UP TO \$62 PER IRRIGATED ACRE
- 50 % COST SHARE ON SEEDING
- UP TO \$500 TO OFFSET SEEDING COSTS
- WELL PLUGGING COST SHARE UP TO \$1,000
- RENEWED LANDOWNER REVENUE FROM HUNTING, BIRD WATCHING & ECO- TOURISM
- ASSURED INCOME WITH ANNUAL CASH PAYMENTS

## BENEFITS TO THE REGION

- SLOW AQUIFER DECLINES
- PROTECT LAND FROM SOIL EROSION WITH IRRIGATED TRANSITION
- REDUCE THE SPREAD OF SALINE WATER
- RESTORE STREAM & RIPARIAN HEALTH

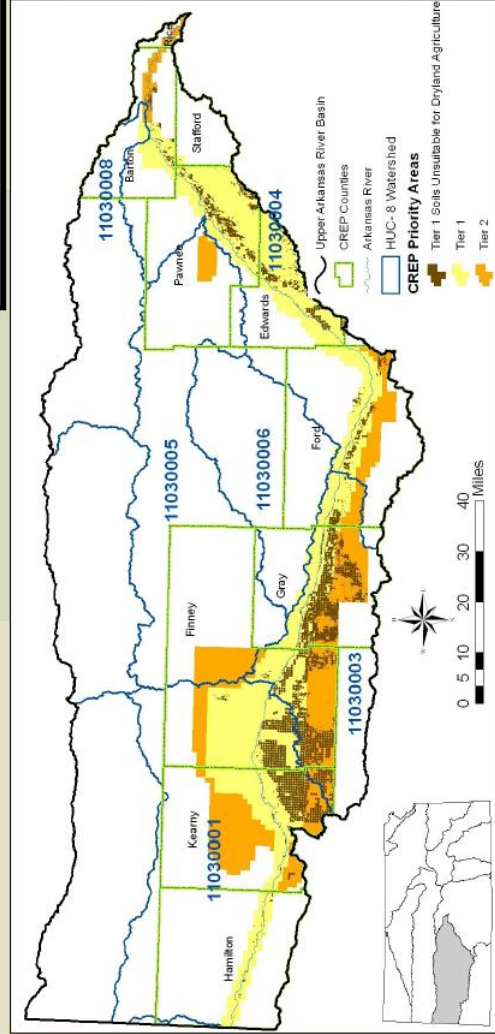


Blown sand in center pivot field. Edwards County

**SIGN-UP AT YOUR LOCAL  
USDA-FARM SERVICE  
AGENCY OFFICE TODAY!**

## FOR MORE INFORMATION CONTACT:

Steve Frost, CREP Coordinator,  
State Conservation Commission,  
(785) 296-3600, STEVE.FROST@SCC.KS.GOV



Arkansas River during high flow  
in 1995 at Dodge City.



Stable grass stand in CREP field. Kearny Co.



Arkansas River dry riverbed as it  
appears now at Dodge City.



SW Kearny Co. sand dunes.

## **Attachment B**

### **Upper Arkansas River Conservation Reserve Enhancement Program Outreach**

#### **December 2007 - December 2008 Outreach for the Conservation Reserve Enhancement Program Events** (Brochure distribution and conversation)

- Stakeholder Meeting – Garden City, GMD3, December, 2007
- Conservation District Meetings in the 10 counties in CREP area – Jan. 11 - Feb. 28, 2008
- GMD5 Meeting – Stafford, February 7, 2008
- No-till on the Plains – Salina, January 2008
- 3i Show – Great Bend, May 2008
- Upper Arkansas Basin Advisory Committee public meeting – Jetmore, May 21, 2008
- Upper Arkansas Basin Advisory Committee public meeting – Garden City, July 16, 2008
- KSU Agronomy Day – August 2008
- Kansas Agribusiness Expo – November 2008
- CREP Producer Outreach Information Meeting – Larned, December 12, 2008; Garden City, December 17, 2008; Dodge City, December 18, 2008

#### **December 2008 - December 2009 Outreach for the Conservation Reserve Enhancement Program**

- Garden City Farm Show – January 2009
- NRCS All Personnel Meeting – Hays, February 11, 2009
- NRCS All Personnel Meeting – Scott City, February 12, 2009
- Collaborative Technical Issues Meeting – Garden City (FSA, NRCS, SCC, KWO, GMDs), February 26, 2009
- Middle Ark WRAPS Meeting – Dodge City (KSU, GMD3), March 3, 2009
- Middle Ark WRAPS Meeting – Larned (KSU, GMD5), March 5, 2009
- Upper Ark WRAPS Meeting – Garden City (KSU, GMD3), March 10, 2009
- Water and the Future of Kansas Conference – Topeka (SCC, KWO Presentation), March 12, 2009
- 3i Show – Great Bend, May 2009
- Kansas legislative Field Tour – Lakin (SCC, KWO Presentation), June 4, 2009
- Stakeholder Meeting – Garden City, GMD3, October, 2009
- Public Information / Education Meeting – St. John (w/ GMD5) October 29, 2009

#### **December 2009 - December 2010 Outreach for the Conservation Reserve Enhancement Program**

- 3i Show - Garden City May 2010
- GMD3 CREP promotion - Ongoing

#### **December 2010 – September 2011 Outreach for the Conservation Reserve Enhancement Program**

- FSA National Press Release – August 23, 2011
- KDA & KWO Kansas Press Release – August 23, 2011
- 3i Show - Great Bend May 2011
- GMD3 CREP promotion - Ongoing

- Second technical meeting preparing for 2011 MOA updates - Dodge City, July 7, 2011 at USDA Service Center (DOC, NRCS, FSA, DWR, GMD3, and GMD5 participating)
- September, 2011 - DOC sent a directed mailing to 1235 landowners who appeared to have eligible water rights in the project area

### **Brochures/Posters**

- Updated CREP promotional poster to be distributed in December at CREP informational meetings in December to FSA offices and Conservation Districts
- Updated CREP promotional brochure for distribution by State Conservation Commission at stakeholder meetings in August.
- Updated CREP promotional brochure used at K-State Agronomy Day.
- Updated CREP promotional brochure used at Kansas Agribusiness Expo.

### **Articles**

- **Establishment of Upper Arkansas River CREP**, (December, 2007, Governor Sebelius and KWO press release)
- [Upper Arkansas River CREP Attracts More Than 12,000 Acres in Seven Days](#) (January 2008 KWO HydroGram)
- [CREP Conservation Practices Include Aquifer Recharge](#) (January 2008 KWO HydroGram)
- [Conservation Reserve Enhancement Program Benefits Water Resources & Farmers](#) (September 2008 KWO HydroGram)
- **Response to Hutchinson Daily News editorial by SCC executive director on behalf of KDA, KDWP, and the KWO** November 2008)
- [Congressional funding measure keeps CRP rolls open](#) (January 2008 HPJ news release)
- Pratt newspaper article on KDWP conducting a wildlife impact survey starting last spring per an article, as part of the CREP effort.

### **Internet**

- **Access to various resources and reports on the Upper Arkansas CREP program are continuously updated and made available on the DOC's website at**

<http://www.scc.ks.gov/node/10>

**ATTACHMENT C**  
**PROCESS FOR IMPLEMENTING UPPER ARKANSAS RIVER CREP IN KANSAS**

**FSA Kansas Exhibit 44 (Par. 171, 401)**  
2-CRP (Rev. 5), KS Amend. 6  
August 23, 2011

| STEP                            | ACTION   | RESULT  |
|---------------------------------|--|---|
| 1. Initial Application with FSA | <p>a. Producer visits local FSA office and provides a recent water use report with water user permit number for offered acreage. FSA enters water right number in CREP database to determine general eligibility.</p> <p>b. If a water right is ineligible and no registry number is assigned, print a screen capture and send an electronic copy to State CREP coordinator. If ineligible and a registry number is assigned, save the file and notify State CREP coordinator.</p> <p>c. If producer's water right meets basic eligibility as determined by CREP database, producer identifies physical location of acres and CREP practice (identify on an aerial photo). FSA uses CRP-GIS tool, and determine total # acres within CREP boundary and within HUCs. FSA estimates federal payment rate through CREP calculator. FSA reviews with producer total incentive package on another tab (includes state upfront payments, cost share, SIPs, PIPs if apply, etc.)</p> <p>NOTE: FSA follows normal continuous enrollment processing found in 2-CRP, Part 7, Section 3.</p> <p>Producer initiates process by signing CRP-2C and CRP-1. NOTE: Applicant signs CRP-2C and CRP-1 based on application acres. The forms will be finalized based on actual contracted acres after water right review.</p> <p>d. FSA informs producer of process and works in conjunction with NRCS to determine appropriate practice. Producer is provided a packet with the process and practices. Producer is provided a sheet listing guidelines for cover crop establishment on sandy sites associated with CREP acres. If producer has questions on a water right issue, he/she is directed to a) DWR or GMD on water right termination issues; b) KDA-DOC for state upfront payments and Shareholder Agreement; and c) KWO for wetland bonus payment. NOTE: No water right is terminated without an approved, signed CREP contract.</p> | <p>a. FSA enters water right number into database and a register number is automatically assigned. This state developed database indicates eligibility based on water right information and location.</p> <p>b. If ineligible on CREP database, process stops here. Producer can contact DWR or GMD to review water use history.</p> <p>c. Save an electronic copy of estimated total CREP payments and send to CREP coordinator.</p> <p>d. State forms are updated with producer information from CREP Calculator tab. FSA prints out a copy for producer, but send to State staff for additional information.</p> <p>Producer is to sign, get additional signatures if needed, make a copy for personal record, and mail all state forms to State CREP Coordinator.</p> |

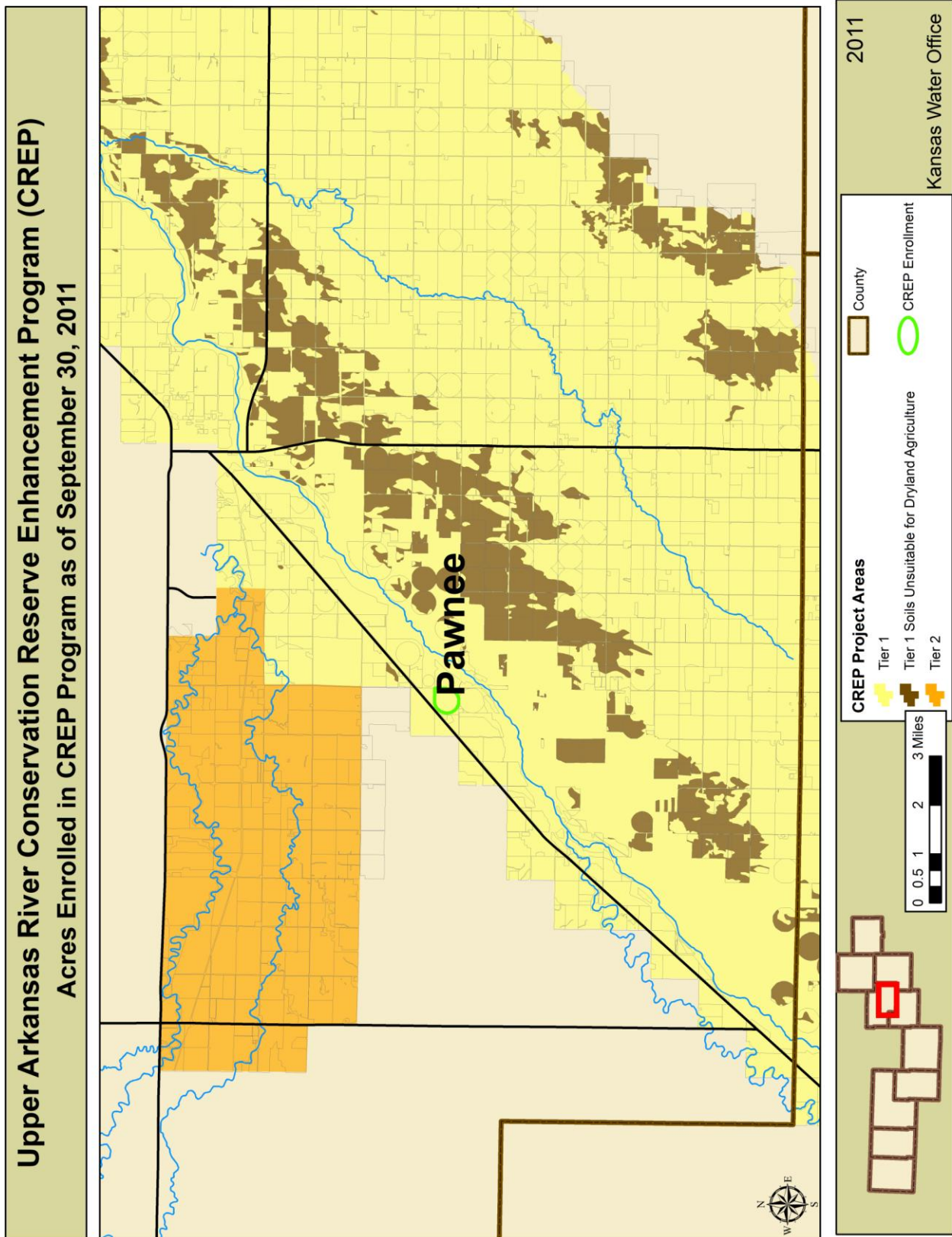
| STEP   | ACTION  | RESULT  |
|--------|---|---|
| 2. FSA | <p>a. Determination of basic Federal CREP Eligibility (FSA County Office)<br/>Example: ownership, person, land, practice, cropping history, CRP acreage cap. Ensure all eligibility requirements as provided in subparagraph 181 in 2-CRP Procedures Manual are met.</p> <p>b. If eligible, FSA recommends conservation practices for application acres, and FSA provides NRCS a copy of CRP-2C. Copy State CREP Coordinator and producer on CRP-2C and map with recommended practices.</p> <p>c. If ineligible based on Federal criteria, FSA notifies producer and copies State CREP coordinator. Explain appeals process to applicant.</p>   | <p>a. FSA enters supplemental information related to practices and acres offered into CREP database.</p> <p>b. If eligible, process moves forward with NRCS and State CREP coordinator.</p> <p>c. If ineligible on federal criteria, producer can review with FSA.</p>  |
| 3. DOC | <p>a. State CREP Coordinator receives CRP-2C and map from FSA, and reviews for state eligibility, including county cap of 25% of total CREP acres. If not eligible, inform producer of finding and explain review process. State CREP coordinator determines predominant tier of irrigated acres in application, in consultation with FSA office.</p> <p>b. Review water right termination form for manageable unit and eligibility. 1) Identify if water right needs to be divided or if application acres have overlapping water rights. If yes, go to Step 3B. 2) Identify if application acres have both a ground water right and ditch water irrigation. If yes, go to Step 3C. 3) Identify if application acres unsuitable for dryland farming; if yes, notify owner he/she has option of requesting limited irrigation condition on water right termination to establish vegetative cover.</p> <p>c. After steps 3B &amp; 3C are complete, if needed, and application meets state eligibility, sign water right termination form and forward it to DWR and copy FSA County Office with current status of application and file completion.</p> <p>d. Enter necessary information on application for SUP.</p> <p>e. Check GIS coverage for Tamarisk on application acres; note it on a file with applicant's name and HUC 8.</p> <p>f. Forward to KWO contract sheet for wetland bonus on CP-9, if applicable, with update on application status.</p> <p>g. Notify producer if application meets state eligibility and if all forms are in order. Provide information on State cost share for well plugging and tamarisk control and see if interested in participation.</p> | <p>a. If applicant doesn't meet state eligibility, explain applicant can meet with DOC to review application.</p> <p>Predominant tier will determine SUP rate.</p> <p>b. If needed, CREP coordinator notifies producer to meet with DWR on water right changes, or to get signatures on shareholder agreement and return to DOC (see 3B and 3C). Copy DWR on the referral.</p> <p>Owner may consider limited irrigation option if soils predominantly unsuitable for dryland farming, and discuss it with FSA as part of CPO, and request it from DWR, if desired.</p> <p>c. Inform FSA office and producer on preliminary status of state eligibility and file completion.</p> <p>d. SUP is to be shared with participants in same arrangement as on CRP contract.</p> <p>e. Notify KWO Tamarisk control Program Manager</p> <p>f. Wetland bonus is to be shared with participants in same arrangement as on CRP contract.</p> |

| STEP            | ACTION  | RESULT   |
|-----------------|---|--|
| 3B. DWR and DOC | <p>If needed:</p> <ul style="list-style-type: none"> <li>a. Applicant meets with DWR or GMD to request necessary changes on water right. DWR or GMD flag change forms as a CREP Application.</li> <li>b. DWR completes process to adjust water right or place of use, so that a water right can be retired on CREP application acres.</li> <li>c. State CREP coordinator re-evaluates application based on split water right or adjusted application acres to confirm eligibility and maximum acres.</li> </ul>       | <ul style="list-style-type: none"> <li>a. Water right may need to be legally split or eligible place of use adjusted, so that a manageable unit is available for CREP enrollment.</li> <li>b. DWR copies CREP coordinator on changed water right information.</li> <li>c. DOC notifies producer and FSA County Office of re-evaluated application, maximum acres and file completeness.</li> </ul> |
| 3C. DOC         | <p>If needed:</p> <ul style="list-style-type: none"> <li>a. CREP Coordinator receives a signed copy of CREP Shareholder Agreement (KCREP_SA_03). Application acres with both a ditch surface irrigation and a ground water right, must file this form to not deliver ditch company surface water on specific tract(s) while enrolled in a CREP contract.</li> <li>b. When CREP Coordinator receives a fully signed form, update CREP database, and notify FSA County office and DWR.</li> </ul>                       | <ul style="list-style-type: none"> <li>a. Applicant gets Irrigation Association or Ditch Company's signature, and returns signed shareholder agreement to CREP Coordinator.</li> <li>b. Enrolled acres cannot be irrigated by surface water during the life of the CREP contract. The associated ground water right must be terminated.</li> </ul>   |
| 4. DWR          | <p>Receives owner and DOC signed water right termination form.</p> <p><b>NOTE: The termination of the water right is conditional upon final approval of CREP contract.</b> The CRP-1 is not approved by the COC at this point.</p>  | <ul style="list-style-type: none"> <li>a. Water right termination form will be held by DWR, and cannot be processed without a copy of producer and FSA signed CRP-1 contract.</li> </ul>   |
| 5. NRCS         | <p><u>If needed:</u></p> <p>NRCS makes a site visit to determine suitability of practice, needs and feasibility.</p>  | <p>NRCS notify FSA County Office of practice suitability. Use CRP-2C form.</p>   |
| 6. FSA and NRCS | <ul style="list-style-type: none"> <li>a. When DOC indicates application file is complete, FSA makes an appointment with applicant to finalize application at county office.</li> <li>b. FSA completes CRP-2C and CRP-1 for irrigated &amp; dryland acres.</li> <li>c. NRCS develops CPO, and fills out CPA-52, CED completes &amp; signs CPA-52. Identify if soil and climate conditions make this site at risk for wind erosion during seeding and special cover crop considerations should be included.</li> </ul> | <ul style="list-style-type: none"> <li>a. Finalize application and adjust final contracted acreage at the county office. Enter the effective date and actual contracted acreage and practice totals to the CREP database.</li> </ul>   |

| STEP                                    | ACTION   | RESULT   |
|---|--|--|
| 7. FSA with producer                    | <ul style="list-style-type: none"> <li>a. County FSA meets with producer to complete application materials.</li> <li>b. Producer signs CPO.</li> <li>c. Notify CREP Coordinator Producer has signed CRP-1 and CPO</li> </ul>   |  |
| 8. FSA, DWR, and DOC                    | <ul style="list-style-type: none"> <li>a. FSA County office confirms by faxed receipt and verification of CREP database, that water termination agreement has been signed by producer and evaluated by DWR.</li> <li>b. COC approves CRP-1 and CPO.</li> <li>c. FSA sends a copy of CRP-1 and map to DWR Appropriations Manager and to State CREP Coordinator, and notifies NRCS.</li> </ul> <p><b>Important:</b> County office must redact (strike) the participants' taxpayer id number(s) prior to providing a copy of the CRP-1 to DWR or DOC.</p> | <ul style="list-style-type: none"> <li>a. FSA notifies producer. DWR updates CREP database.</li> <li>b. FSA County office updates CREP database with COC approval date.</li> </ul>   |
| 9. DWR, DOC, and FSA                    | <ul style="list-style-type: none"> <li>a. DWR receives the copy of signed CRP-1 and issues the water right termination order by the Chief Engineer. DWR sends order to owner, with a reminder owner is responsible for filing a copy with County Registrar of Deeds. DWR provides a copy to State CREP coordinator.</li> <li>b. DOC notifies FSA county office of agreement completion, and updates CREP database.</li> </ul>  | <ul style="list-style-type: none"> <li>a. As applicable, FSA approves and pays SIP.</li> <li>b. As applicable, State CREP Coordinator approves and pays SUP to participants as share on CRP contract.</li> </ul>   |
| 10. NRCS or producer, FSA, DOC, and KWO | <ul style="list-style-type: none"> <li>a. NRCS conducts an on-site review of practice installation and submits to FSA certified AD-862 certifying installation, or producer submitted certification of practice (Form AD-245).</li> <li>b. FSA sends a copy of AD-862 or AD-245 to Pheasants Forever/Quail Forever, and CREP coordinator.</li> <li>c. CREP coordinator notifies KWO of CP-9 practice installation, where eligible for wetland bonus payment, and updates CREP database.</li> </ul>   | <ul style="list-style-type: none"> <li>a. As applicable, FSA issues PIPs, Hydrology, and cost share payments.</li> <li>b. PF/QF pays up to \$500 / producer for seeding cost share.</li> <li>c. KWO pays wetland bonus on CP-9, to participants as share on CRP contract.</li> </ul> |

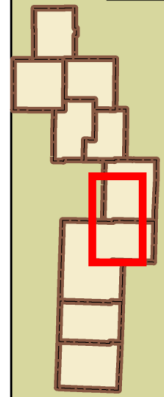
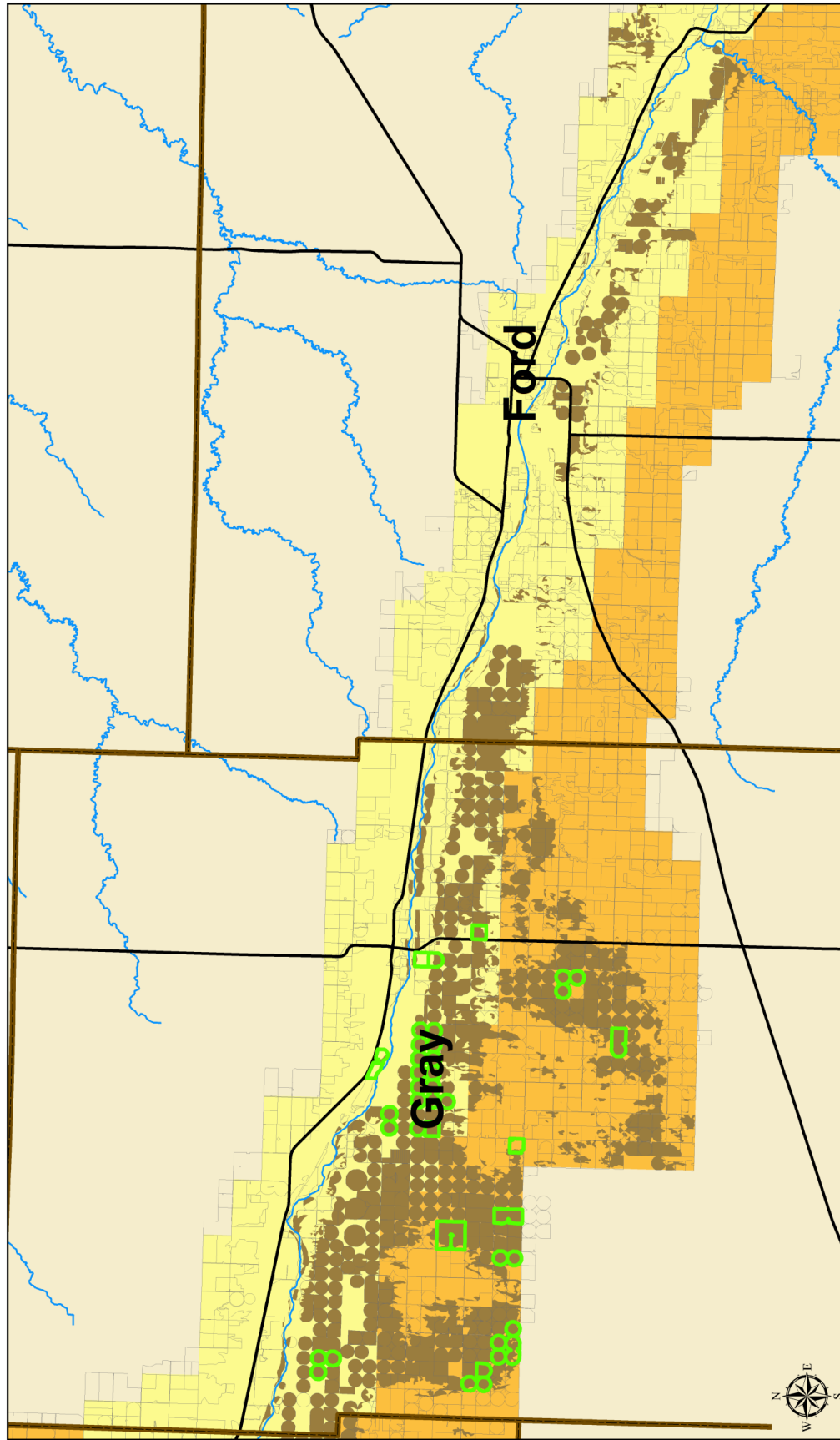
# ATTACHMENT D

## MAPS OF ACRES OFFERED FOR ENROLLMENT IN THE UPPER ARKANSAS RIVER CONSERVATION RESERVE ENHANCEMENT PROGRAM (CREP) BY COUNTY AS OF September 30, 2011



# Upper Arkansas River Conservation Reserve Enhancement Program (CREP)

Acres Enrolled in CREP Program as of September 30, 2011



## CREP Project Areas

Tier 1

Tier 1 Soils Unsuitable for Dryland Agriculture

Tier 2

County

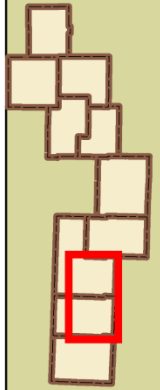
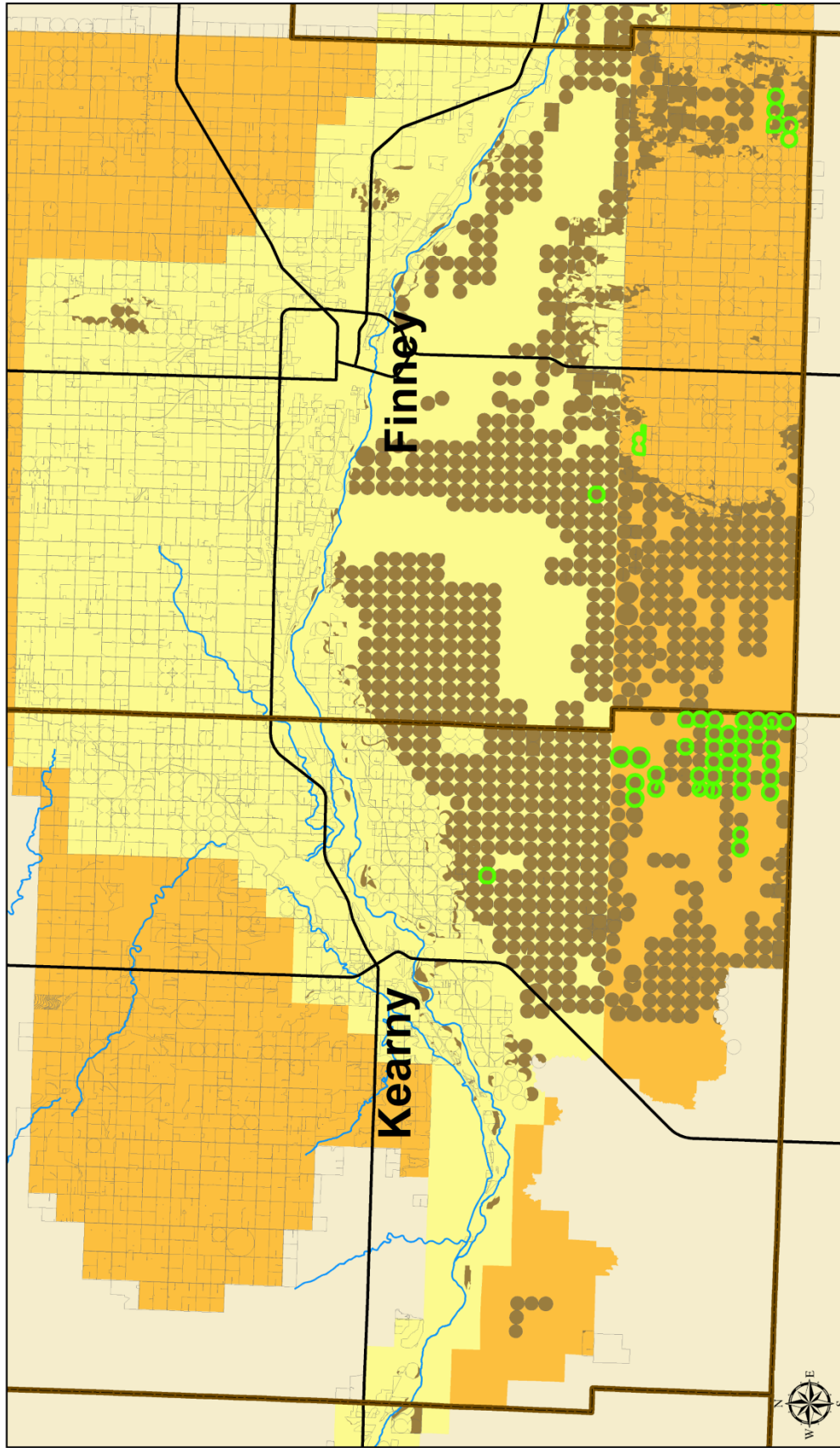
CREP Enrollment

2011

Kansas Water Office

# Upper Arkansas River Conservation Reserve Enhancement Program (CREP)

Acres Enrolled in CREP Program as of September 30, 2011



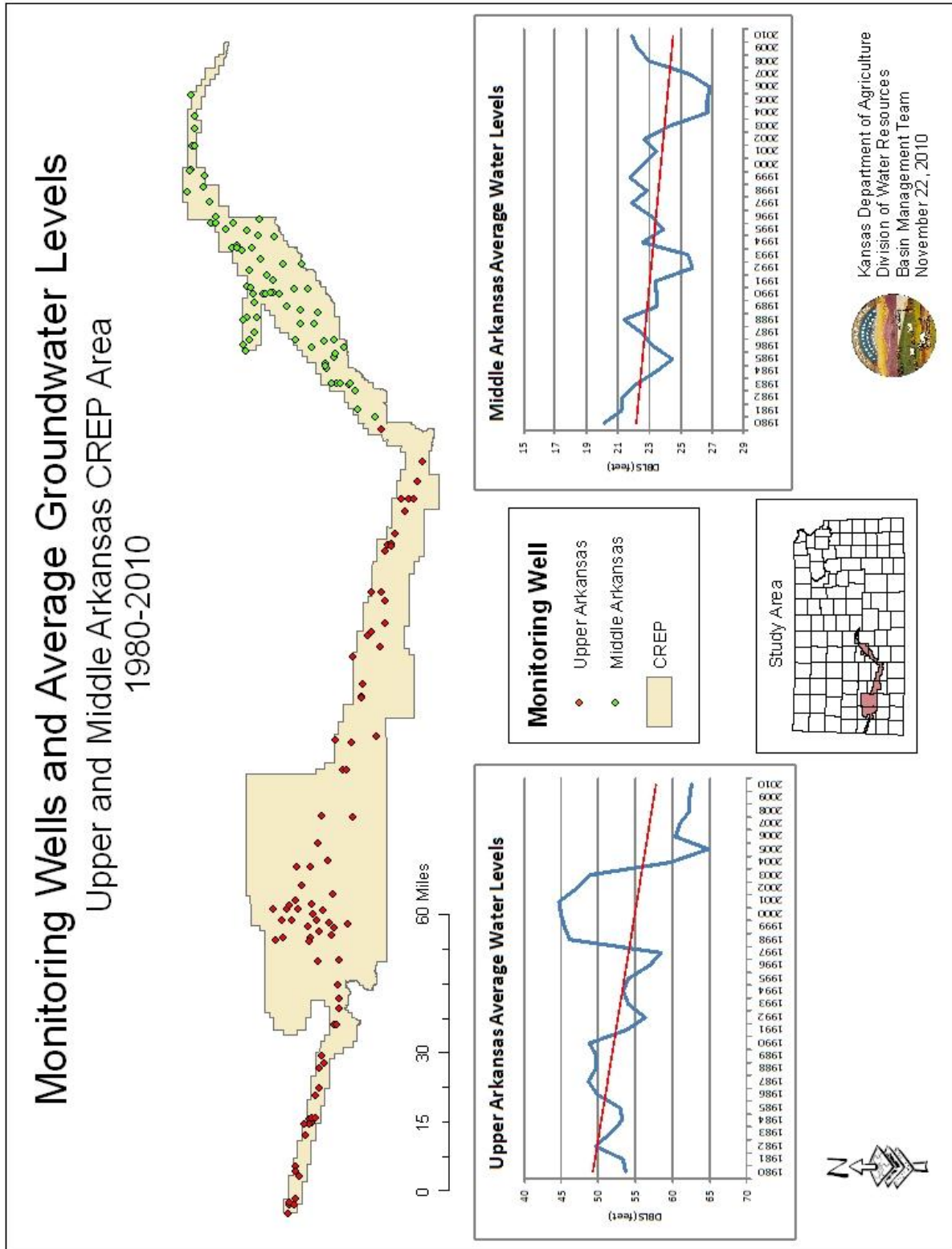
0 0.75 1.5 3 4.5 Miles

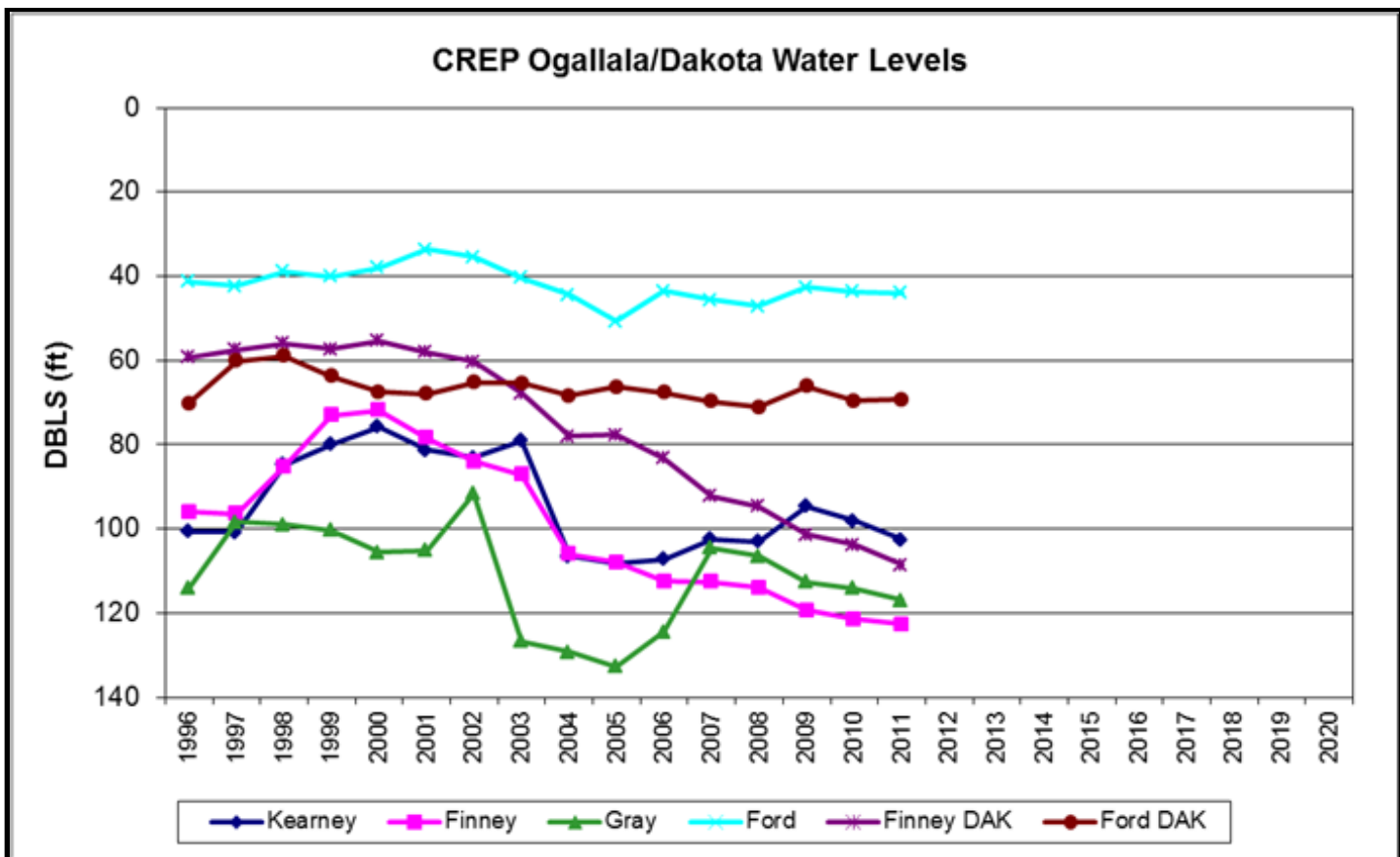
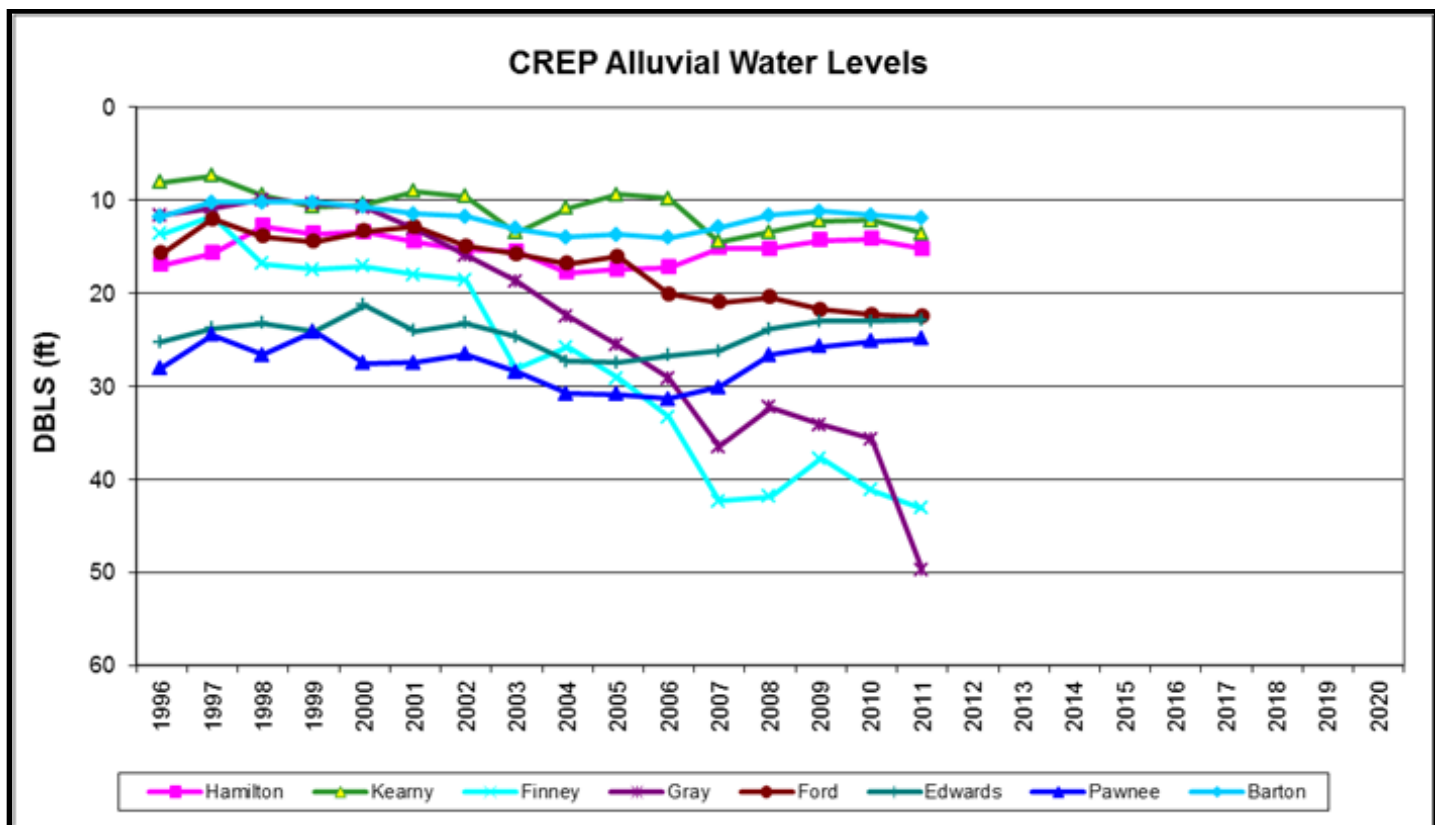


2011

Kansas Water Office

# Attachment E Monitoring Wells and Average Groundwater Levels





**Attachment F**  
**Steering Committee Minutes**

**CREP Steering Committee Meeting**  
**Tuesday, September 27, 2011**  
**10:00AM**  
**DOC Conference Room**

**Attendees:**

Steve Frost & Greg Foley (DOC); Susan Stover & Diane Coe (KWO); Rich Eubank & Darci Paull (DWR); Michelle Probasco (KDHE); Rod Winkler & Carla Wikoff (FSA). **Joining by phone:** Andy Burr & Joni Franklin (NRCS); Mike Mitchener (KDWPT); Mark Rude & Trevor Ahring (GMD 3); Don Whittemore (KGS); Tony Jacobs (PF).

**Proceedings:**

Steve started the meeting with introductions and updating enrollment numbers for the CREP program.

- \*12,563 acres have been offered for enrollments (processed and pending)
- \* 67 state contracts approved
- \*11,013 acres have been permanently retired
- \*79 water rights, 95 wells, and 22,245 AF authorized quantity have been permanently retired
- \*99% are in the CP2 practice code for native grasses
- \* 85% of enrolled acres are located on "Tier 1" or "Tier 1 Unsuitable" soils
- \*\$665,260 paid by state for up front incentive payments
- \*\$20 M. (approx.) will be paid out by FSA over the next 14-15 years
- \*2,483 qualifying water rights still potentially eligible for enrollment in the project area

Enrollment has had several peaks and valleys since the project start date on December 20, 2007 but enrollment has been fairly slow all throughout 2011. Sometimes acres are enrolled and approved under a state contract, then withdrawn prior to final CRP-1 approval by FSA due to owner / tenant disagreements, limiting CRP rules, etc.

On January 18, DOC suspended all application processing due to CREP funds which were being considered for rescission by the state budget office. This potential problem was subsequently averted. Later, the 2011 Legislature approved carryover of the remaining CREP funds of \$837,425 (to be shared jointly with the WTAP program) for FY2012 with a total "potential" enrollment of 40,000 acres.

The newly revised MOA with USDA – FSA was approved on August 23, 2011 and authorizes an approved project limit of 28,950 total acres with an opportunity to increase at a later date. This action raises the individual county cap from 5,000 acres to 7,237.5 acres and will allow some pending applications to now be processed. FSA had recently approved increased irrigated rental rates of \$5 - \$15; all project HUCs will now reflect rates of \$110 - \$140.

Steve reported that one particularly outstanding merit of the CREP program to date has been establishing cover on highly erodible lands in the project area. The extremely sandy and fragile, windblown soils of the sandhills would be very difficult to re-vegetate when irrigation is no longer possible due to groundwater declines and crop production runs out. The CREP program has given these area producers a viable option for

starting grass stands while limited irrigation water is still available and with the financial opportunity and incentive to do it. There have been some real success stories on providing CRP covers. The committee reviewed some photos of the sandhill challenges and results in the program so far.

#### **Agency Reports / Special Comments from the Agencies:**

**FSA** – Rod and Carla stated that the two main challenges for the program this year have been grass establishment issues (exacerbated by the extreme drought in southern Kansas) and identifying what barriers exist for producers who wish to enroll. The recent amendments to the Kansas agreements with FSA should help in providing additional incentives to producers and allow some of the “pending acres becoming available” applications to be processed now.

**NRCS** – Andy stated that the drought is negatively impacting seed stands and he suspects that many fields seeded this summer will have to be re-seeded. NRCS is conducting spot checks on 10% of the enrolled acres to determine compliance with approved practices and timeframes. Joni mentioned that the technical meeting conducted at the USDA Service Center on July 7 had been very productive in communicating some of the challenges of successful grass establishment in the CREP project area and the techniques which NRCS is implementing at the field level.

**KWO** – Susan commented on some of the current budget / funding issues in the Kansas Legislature and what can be done to extend the CREP programming. A question will be researched regarding whether there is a time limit on the duration of the program. Diane is the advisor for the Upper Ark Basin BAC and is also assisting GMD#3 in oversight of the Western Kansas Water Conservation Projects Fund (which is administered by GMD3 and affects the amount of direct match attributed to CREP).

**DWR** – Rich discussed drought issues related to the time frame for extended irrigation after the official water right dismissal on enrolled acres. Also, Darci stated that the CREP data base has been updated with the new “BRO” list in June which will determine qualifications with the state criteria for water use eligibility. DWR has recently assisted DOC with constructing a mailing list of approximately 1235 landowners who appear to have eligible water rights in the project area. Field staffs are also still working with the pressure transducers installations in specific monitoring areas in Kearny County.

**KDHE** – Michelle reported that their office is has been working in the Upper Ark basin in 2011 establishing an updated list of 303d impairments (TMDL listings) will be issued by EPA in 2012. She noted that everything seems fine with the monitoring scheme for CREP and that KDHE will continue the water quality monitoring.

**KGS** - Don has run some scenarios with the GMD 3 hydrologic model using the current and maximum possible enrollment numbers as far out as 60 years. His general findings are that there are definitely local effects from the wells being shut off, but not very much in terms of regional influences with the currently allotted numbers. He mentioned that there would probably be no observable return of surface flows to the river due to CREP enrollments in the short term. Don also talked about the continuing issue of uranium contributions from Colorado and the impact along the Arkansas River corridor in Kansas – we need to know more about “how is the uranium traveling through the aquifers and impacting wells?” Like all of the agency partners, KGS has been the recipient of budget cuts which have eliminated the water analysis staff in the laboratory. Don’s staff are also reviewing information from the water level program and evaluating raw data from various impairment areas.

**PF** - Tony Jacobs introduced himself as the new Western Kansas representative for the Kansas Chapter. Although he is new to the CREP project, he looks forward to working with the producers and other partners in the cooperative effort.

**GMD3** – Mark noted that even though the immediate water level effects of the CREP enrollments will be hard to quantify, there is also an added recharge benefit to having less wells in the area. He raised the question of

the joint CREP / WTAP funding and how that was proceeding for the future in light of demanding budgetary concerns. Mark mentioned that there have been conversations about potential local match funding for the CREP incentive payments. The district still has plans to reapply for AWEPP again next year and integrate CREP and AWEPP together, if possible. Their proposal would work in coordination with CREP to help cover some of the cost of transitioning irrigated agriculture into grassland on poor, sandy soils. The district staff feels there is still interest in CREP enrollments and that the enhancements can be helpful in securing additional offers.

**GMD5** – Wes Esmiller said the district continues to promote awareness of CREP and gain some enrollment within the District. There seems to be very little interest in the eastern portions of the project area because of the relatively shallow and stable water tables, and the currently rising market in land values and commodity prices.

#### **Data Needs for Monitoring Results:**

In regard to the annual report, Steve asked that all the entities get their costs and narratives of activities in by early October. The report is based on the federal fiscal year, October 1, 2010 to September 30, 2011. It was again noted that many of the monitoring activities which are incorporated in the CREP MOA are difficult for the agencies to significantly undertake at this time – or to determine any significant changes in results or impacts due to the CREP project. Even though enrollment is still increasing at this time, almost the entirety of the enrollment has been located in areas of the Tier 1 / Unsuitable soils which will require continued irrigation for another couple of years. We have yet not seen any significant water use curtailment to monitor.

#### **Enhancing Enrollment during 2011 – 2012:**

Kansas is looking for more ways to increase interest and enrollment in CREP. Steve reported on the directed mailing effort and another “get out the word” campaign. Susan noted the program expansion really only impacts Gray & Kearney counties in the short term (those are the ones exceeding or nearing the county enrollment cap). Carla confirmed that the irrigated rental rate increases are approved and now being implemented in the counties. Susan and Carla confirmed that the new rates have been incorporated into the counties’ “CREP Calculator” tools and that they are working. The revised brochures and informational posters are ready and have been distributed to the county and field offices. DOC, KWO and the GMDs will work to re-market and promote the program noting the higher rates and the successes of the grass establishment strategies.

#### **Recommendations for Future Modifications to CREP Program Rules / Procedures:**

No other items were specifically discussed at this time.

#### **Identification of Other Issues:**

Several questions / issues were raised in general discussion about the program implementation. Greg asked about the drought effects on emergency haying / grazing provisions. Don inquired about what procedures exist for monitoring the health of the grass which has already been established. Rich asked about the enforcement of well capping requirements, and who can provide assistance to both the agencies and producers in insuring that this is done properly. Don asked that any caps be equipped with access ports for water level measurements (and also reminded us that internal well plugging won’t prevent contamination of the aquifer through the gravel pack of the well). Steve offered to do some public meetings in Hamilton County now that they are eligible to participate in the CREP program for the first time.

#### **Conclusion:**

The members were sincerely thanked for their time and efforts in fulfilling the mission of the CREP program. The meeting was concluded at 10:58 AM.